TOSHIBA

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SERVICE MANUAL

PLASMA MONITOR

42WP26H, 42WP26K
42WP26R

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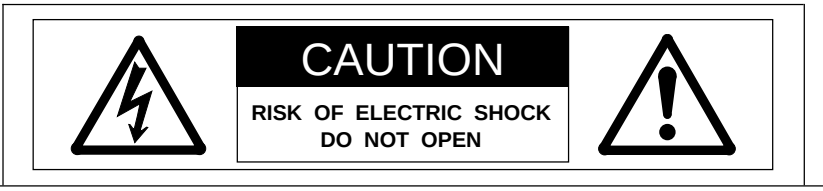
SAFETY PRECAUTIONS



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN REAR COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included.
Therefore, it should be read carefully in order to avoid any problems.

ATTENTION: POUR EVITER LES RISQUES D' ELECTROCUTION, NE PAS ENLEVER LE CONVERCLE ARRÈRE. AUCUN DES ELEMENTS INTERNES NE DOIT ETRE REPARE PAR L'UTILISATEUR. NE CONFIER L' ENTRETIEN QU'A UN PERSONNEL QUALIFIE.

L'éclair fléché dans un triangle équilatéral est destiné à avertir l'utilisateur de la présence, dans l'appareil, d'une zone non-isolée soumise à une haute tension dont l'intensité est suffisante pour constituer un risque d'électrocution.

Le point d'exclamation dans un triangle équilatéral est destiné à attirer l' attention de l'utilisateur sur la présence d'informations de founctionnement et d'entretien importantes dans la brochure accompagnant l'appareil.

WARNING
HEATSINK MAY BE ENERGIZED.
TEST BEFORE TOUCHING.

SAFETY PRECAUTIONS

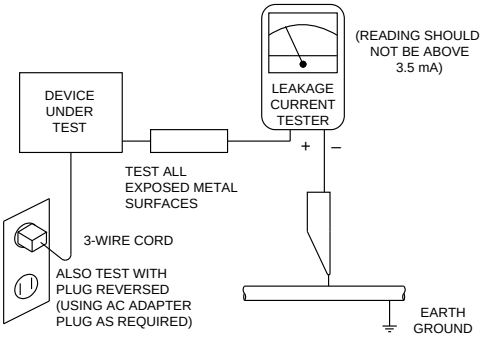
1. **Before returning an instrument to the customer**, always make a safety check of the entire instrument, including, but not limited to, the following items.

   a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including,but not limited to, nonmetallic control knobs,insulating fishpapers,adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.**

   b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such opening include,but are not limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

   c. **Leakage Current Hot Check** — With the instrument completely reassembled,plug the AC line cord directly into a 240V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institutes (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories(UL) 1950. With the instrument AC switch first in the ON position and then in the OFF position, measure from a known earth ground (metal waterpipe, conduit,etc.) to all exposed metal parts of the instrument(antennas, handle bracket, metal cabinet, screwheads, metallic overlays, control shafts,etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 3.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test.**ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER.**

AC Leakage Test



2. Read and comply with all caution and safety-related notes on or inside the Monitor cabinet, on the Projection Monitor chassis, or on the picture tube.

3. **Design Alteration Warning** — Do not alter or add to the mechanical or electrical design of this unit. Design alterations and additions, including, but not limited to, circuit modifications and the addition of the items such as auxiliary audio and/or video output connections might alter the safety characteristics of this Monitor and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and will make you,the servicer,responsible for personal injury or property damage resulting therefrom.

4. **Hot Chassis Warning — a.** Some MultiSync Monitor chassis are electrically connected directly to one conductor of the AC power cord and may be safely serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground. **b.** Some Plasma chassis normally have 85V AC (RMS), between chassis and earth ground regardless of the AC plug polarity. These chassis can be safely serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection. **c.** Some Plasma chassis have a secondary ground systems in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground system are electrically separated by insulating material that must not be defeated or altered.

SAFETY PRECAUTIONS

5. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: **a.** near sharp edges, **b.** near thermally hot parts—be sure that leads and components do not touch thermally hot parts, **c.** the AC supply, **d.** high voltage, and **e.** antenna wiring. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.

6. Components,parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally,determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

7. **PRODUCT SAFETY NOTICE** —Many MultiSync Monitor electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in this service data by shading with a ⚠ mark on schematics and by shading or a ⚠ mark in the parts list. Use of a substitute replacement part that does not have the same safety characteristics as the recommended replacement part in this service data parts list might create shock, fire, and/or other hazards.

PRECAUTIONS DE SECURITE

1. Avant de remettre un appareil à un client, faire toujours d'abord un examen de sécurité de l'appareil en entier comprenant, mais ne s'y limitant pas les points cités ci-dessous:

a. Vérifier qu' aucun des dispositifs de protection ne soit défectueux ou n' ait été endommagé pendant les travaux.

(1) Les volets protecteurs sur ce châssis ont été montés pour protéger aussi bien le technicien que le client. Remplacer correctement tous les volets protecteurs manquants, aussi bien que ceux qui ont pu être enlevés pour la commodité des travaux.

(2) Quand vous remettez le châssis ou d'autres assemblages ensemble dans le coffret, vérifier qu' ont été remis à leur place tous les dispositifs de protection, comprenant mais ne s' y limitant point, les boutons de contrôle non-métalliques, les feuilles d'isolation, les couverture/volets de l'ajustement et du compartiment, et l'isolation des réseaux résistance/condensateur. **Ne pas travailler sur cet appareil ni permettre qu'y soit effectué un travail sans que tous les dispositifs de protection n' y soient correctement installés fonctionnants.**

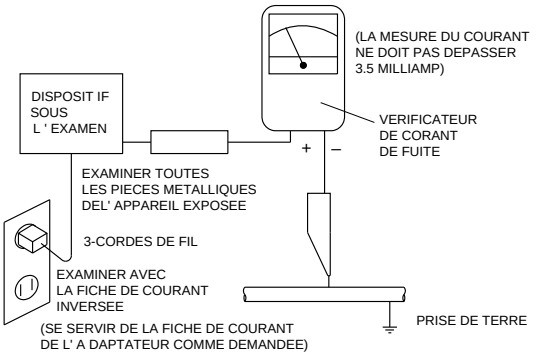
b. Bien vérifier qu'il n'y ait aucune ouverture sur le coffret qui ne puisse permettre à un adulte ou à un enfant d'y faire pénétrer ses doigts et attraper une décharge électrique.

De telles ouvertures comprendraient sans pour autant s'y limiter (1) l'espace entre le tube à images et le coffret de l'eppareil, (2) les espaces excessivement ouverts pour la ventilation et (3) la couverture arrière du coffret improprement fixée ou incorrectement protegée.

c. **Vérification de courant de fuite**

L'appareil ayant été complètement réassemblé, brancher-le à une prise de courant de 240V. (Ne pas se servir d'un transformateur d'isolation pendant ce test). Se servir d'un vérificateur de courant d'excitation ou d'un système de mesure conforme aux normes ANSI (American National Standards Institute) C101.1 Leakage Current for Appliances et U. L (Underwriters Laboratories) 1950. Le bouton de l'appareil en position "Marche" et ensuite en position "Arrêt", mesurer à partir d'une prise de terre (métallique tuyauterie, conduite, etc...) à toutes les pièces métalliques de l'appareil exposées (antennes, poignet métalliques, coffren métallique, tête des vis, surfaces métalliques, traits de contrôle, etc.) surtout à toutes les pièces métalliques exposées qui peuvent reconduire le courant au châssis. En aucun cas, la mesure du courant ne doit dépasser 3.5 milliamp. Inverser la fiche de courant de l'appareil dans la prise et répéter le test. **Tout mesurage ne s'arrêtant pas aux limites spécifiées icicomporte un risque de décharge électrique dangereux, qui doit être éliminé, avant que l'appareil ne soit remis au client.**

EXAMEN DE COURANT
D'EXCITATION



2. Lire et respecter toutes les mises en garde et notes de sécurité à l'intérieur ou à l'extérieur du coffret du rétro-projecteur, sur le châssis du rétro-projecteur ou sur le tube à images.

3. Mise en garde contre la modification du dessin

Ne pas modifier ni ajouter à la pièce mécanique ou électrique du modèle. Des modifications ou additions, comportant, mais ne s'y limitant pas, des modifications des circuits et l'addition d'éléments tels que des auxilliairs audio et/ou des branchements pour la prise de vidéo, pourrait éprouver la sécurité de ce rétro-projecteur et créer un risque pour l'utilisateur. Tout changement ou addition accomplie annulera la garantie du fabricant et va rendre votre service d'entretien, responsable des dommages corporels ou de biens en résultant.

4. Mise en garde contre le châssis sous tension

a. Certains châssis de rétro-projecteur sont électriquement reliés à un conducteur du fil de courant et ainsi peuvent ne comporter aucun risque sans un transformateur d'isolation seulement si la prise de courant est branchée, de manière que le châssis est relié à la prise de terre de la source de courant. Pour s'assurer que la prise de courant est correctement insérée, relever les mesures avec un voltmètre de courant entre le châssis et un point de prise de terre bien connu. Si le voltage indiqué est supérieur à 1,0V, débrancher et reinsérer la prise de courant dans la polarité contraire et une fois de plus remesurer le voltage potentiel entre le câssis et la prise de terre.

b. Certains châssis de moniteur ont habituellement 85V (RMS) entre le châssis et la prise de terre, en fonction de la polarité de la prise de courant. Ces châssis peuvent ne comporter aucun risque seulement avec un transformateur d'isolation inséré dans la ligne de puissance située entre de rétro-projecteur et la source d'électricité, cela pour la protection aussi bien du personnel que du matériel de vérfication.

c. Certains châssis de rétro-projecteur ont un système secondaire de masse en addition avec le système principal de masse du châssis. Ce système secondaire de masse n'est pas isolé du courant électrique. Les deux systèmes sont électriquement séparés par du matériel d'isolation qu' on vérifiera bien qu'il ne soit ni altéré ni défectueux.

5. Vérifier la couverture originale en plomb. Accorder la plus grande attention à la couverture de plomb notamment aux endroits ci-dessous indiqués.
   a. Près des bords aigus
   b. près des parties très chaudes
      Vérifier que les composants et les plombs ne touchent pas les parties très chaudes telles que:
   c. l'alimentation du courant
   d. la haute tension
   e. les fils de l'antenne

   Pousser l'inspection, à tous les endroits, à la recherche des cordes pincées, déplacées ou effilochées. Ne pas changer l'écartement entre composants, et entre composants et le tableau de circuit imprimé. Vérifier que le fil de conduite électrique est en bon état.

6. Les composants, parts (pièces) et/ou fils qui ont été trouvés surchauffés devraient être remplacés avec les composants, pièces et fils s'y reliant avec d'autre qui ont les mêmes spécifications que les originales. De plus, rechercher la cause du surchauffement et/ou des dommages et si nécessaire, prendre les mesures propres pour prévenir tout risque potentiel.

7. Note sur sûreté de l'appareil

Beaucoup de pièce de rétro-projecteur, qu'elles soient électriques ou mécaniques, ont des dispositions de sécurité qui ne sont pas toujours évidentes d'une simple inspection visuelle et la protection qu'elles donnent nécessairement ne pourront être pas obtenues par les remplaçants avec des composants aux voltages ou watts plus élevés.

Les pièces qui ont des caractéristiques particulières de sécurité sont identifiées avec un trait ⚠ marqué sur les schémas et sont ombragés ou comportent un trait ⚠ sur la liste des pièces. L'utilisation d'un produit substitutif qui n'aurait pas les mêmes caractéristiques comme il est recommandé dans ces données d'entretien pourrait provoquer une décharge électrique, un feu, et/ou d'autres dangers.

SAFETY PRECAUTIONS

1 . Cautions for disassembly

(1) For the suspension-type set (No. of workers: 3 to 5 including assistants)

- Take adequate measures in order not to damage the surface of the set or the filter, using a protection mat (vinyl sheet or blanket).
- When relieving the set from the condition of suspension from the ceiling, do not tilt its main body too much by supporting its both sides, while the mounting hooks (top and bottom) are released. (Reasons: If the main body is positioned slantwise, a load is applied to its upper part and there can be danger of making the set fall down carelessly when the set is unhooked.)
- During disassembly, the allocation of personnel should be such that suitable stands or platforms are assuredly arranged to enable the personnel to support the set, standing on both sides of the set. For safety, it is preferable to provide for assistant personnel who can receive the removed set.
- During this removal work, support the set at its frame with hands. Never touch the filter or glass surface. Assistant personnel on the front side should apply hands to the lower part of the casing. [If the casing is strongly hit with a wooden hammer or the like, the unseen side area of the module panel glass may be broken even though the module itself does not seem to have been broken . Therefore , support the frame by hand in order not to drop it.]

(2) For the wall-hang type, corner type, or pole unit mounting set (No. of workers: 2 <generally>)

- Examining a good timing, release the mounting hooks (top and bottom) from the right and the left.
- If the set is installed in an elevated place, provide for firm scaffolds in advance. It is preferable to ask for the support of assistant personnel as in the case of the suspension type.
- During this removal work, try to support the set at its frame with hands. Never touch the filter or glass surface. Assistant personnel on the front side should apply hands to the lower part of the casing. [If the casing is strongly hit with a wooden hammer or the like, the unseen side area of the module panel glass may be broken even though the module itself does not seem to have been broken. Therefore, support the frame by hand in order not to drop it.]

2. The least minimum caut ions for product disassembly

- Secure a working space, arranged as wide as possible.
- Prior to disassembling the set, protect the acrylic surface with an air mat or the like.
- To prevent the thread ridges from being damaged, use an adequate screwdriver.
- Many screws are actually used. Therefore, use two or three containers where these screws can be kept . Never disassemble the inner parts of the module (pipes, etc.).
- When lifting the module from the set, two persons should stand on both sides of the module to hold the stable parts of the junction while they lift the module upright. (If dust or such foreign substance enters in between the module and the filter, moir* or similar problems can arise. In addition, once it enters, it is necessary to take careful measures not to damage the contamination area while removing contaminants.) [Please understand that the replacement of the module may call for an air-blast treatment (air brush) in a clean room.]
  Complementary caution) In particular, if a conductive foreign matter (such as a metallic chip) is attached to the flexible cable of the module, there can be danger of the occurrence of a phenomenon like wire breakage that is caused by partition breakdown in the module. For this reason, it is necessary to bear in mind that the flow of air blast should be directed only in the predetermined direction at all times.

3. Method of returning the set (when returning the set to the manufacturing base in Japan)

- When returning the set, put the set in the specified package box.
  Otherwise, swinging and vibration loads may be applied to the set during transportation, and this may give rise to destruction of a mounting section, such as gas-hermetically-sealed pipe (glass) of the module.
- When optional parts are also put in the box for returning, a list of options (accessories) should also be produced and returned, if possible. This arrangement is effective to confirm the owner of the returned items.
- To confirm the user-oriented problem, and for the purpose of future improvements, a report of reasons for malfunction should also be packed.
  A definite address should be specified so that the repaired set can be returned and faulty phenomena can be confirmed .

(Notes)

The component by the name of “module” used in this product is defined as a section that is provided with a digital circuit board (including high-voltage parts) used to emit light in the glass panel part, excluding the surface acrylic filter or the tempered glass filter. It must be noted that it does never mean the glass panel part only.

USER'S MANUAL

TOSHIBA

OWNER'S MANUAL

PLASMA MONITOR

42WP26H
42WP26K
42WP26R

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Important Information

Precautions

Please read this manual carefully before using your Toshiba plasma monitor and keep the manual handy for future reference.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS, UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warnings and Safety Precaution

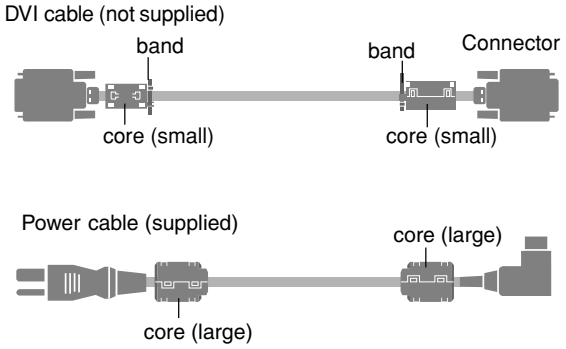
The Toshiba plasma monitor is designed and manufactured to provide long, trouble-free service. No maintenance other than cleaning is required. Use a soft dry cloth to clean the panel. Never use solvents such as alcohol or thinner to clean the panel surface.

The plasma display panel consists of fine picture elements (cells). Although Toshiba produces the plasma display panels with more than 99.99 percent active cells, there may be some cells that do not produce light or remain lit.

For operating safety and to avoid damage to the unit, read carefully and observe the following instructions. To avoid shock and fire hazards:

1. Provide adequate space for ventilation to avoid internal heat build-up. Do not cover rear vents or install the unit in a closed cabinet or shelves.
   If you install the unit in an enclosure, make sure there is adequate space at the top of the unit to allow hot air to rise and escape. If the monitor becomes too hot, the overheat protector will be activated and the monitor will be turned off. If this happens, turn off the power to the monitor and unplug the power cord. If the room where the monitor is installed is particularly hot, move the monitor to a cooler location, and wait for the monitor to cool for 60 minutes. If the problem persists, contact your Toshiba dealer for service.
2. Do not use the power cord polarized plug with extension cords or outlets unless the prongs can be completely inserted.
3. Do not expose the unit to water or moisture.
4. Avoid damage to the power cord, and do not attempt to modify the power cord.
5. Unplug the unit during electrical storms or if the unit will not be used over a long period.
6. Do not open the cabinet which has potentially dangerous high voltage components inside. If the unit is damaged in this way the warranty will be void. Moreover, there is a serious risk of electric shock.
7. Do not attempt to service or repair the unit. Toshiba is not liable for any bodily harm or damage caused if unqualified persons attempt service or open the back cover. Refer all service to authorized Service Centers.

NOTE:
When you connect a computer to this monitor, attach the supplied ferrite cores. If you do not do this, this monitor will not comform to mandatory FCC standards.
Attaching the ferrite cores:
Set the ferrite cores on both ends of the DVI cable (not supplied), and both ends of the power cable (supplied).
Close the lid tightly until the clamps click.
Use the band to fasten the ferrite core (supplied) to the DVI cable.



To avoid damage and prolong operating life:

1. Use only with 120V 50/60Hz AC power supply. Continued operation at line voltages greater than 120 Volts AC will shorten the life of the unit, and might even cause a fire hazard.
2. Handle the unit carefully when installing it and do not drop.
3. Set the unit away from heat, excessive dust, and direct sunlight.
4. Protect the inside of the unit from liquids and small metal objects. In case of accident, unplug the unit and have it serviced by an authorized Service Center.
5. Do not hit or scratch the panel surface as this causes flaws on the surface of the screen.
6. For correct installation and mounting it is strongly recommended to use a trained,authorized Toshiba dealer.
7. As is the case with any phosphor-based display (like a CRT monitor, for example) light output will gradually decrease over the life of a Plasma Display Panel.

Recommendations to avoid or minimize phosphor burn-in

Like all phosphor-based display devices and all other gas plasma displays, plasma monitors can be susceptible to phosphor burn under certain circumstances. Certain operating conditions, such as the continuous display of a static image over a prolonged period of time, can result in phosphor burn if proper precautions are not taken. To protect your investment in this plasma monitor, please adhere to the following guidelines and recommendations for minimizing the occurrence of image burn:

* Always enable and use your computer's screen saver function during use with a computer input source.
* Display a moving image whenever possible.
* Change the position of the menu display from time to time.
* Always power down the monitor when you are finished using it.

If the plasma monitor is in long term use or continuous operation take the following measures to reduce the likelihood of phosphor burn:

* Lower the Brightness and Contrast levels as much as possible without impairing image readability.
* Display an image with many colors and color gradations (i.e. photographic or photo-realistic images).
* Create image content with minimal contrast between light and dark areas, for example white characters on black backgrounds. Use complementary or pastel color whenever possible.
* Avoid displaying images with few colors and distinct, sharply defined borders between colors.

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How to Attach Options to the Plasma Monitor

You can attach your optional mounts or stand to the plasma monitor in one of the following two ways:

* While it is upright. (See Drawing A)
* As it is laid down with the screen face down (See Drawing B). Lay the protective sheet, which was wrapped around the monitor when it was packaged, beneath the screen surface so as not to scratch the screen face.

- **This device cannot be installed on its own. Be sure to use a stand or original mounting unit. (Wall mount unit, Stand, etc.)**

*** See page 2.**

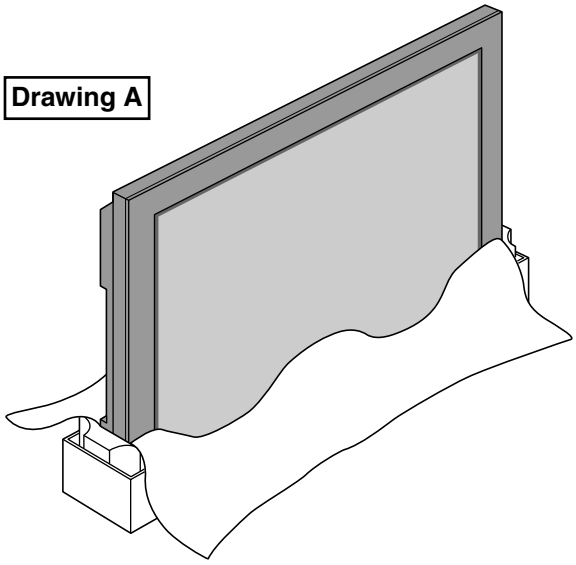
- **For correct installation and mounting it is strongly recommended to use a trained, authorized dealer.**

  Failure to follow correct mounting procedures could result in damage to the equipment or injury to the installer.

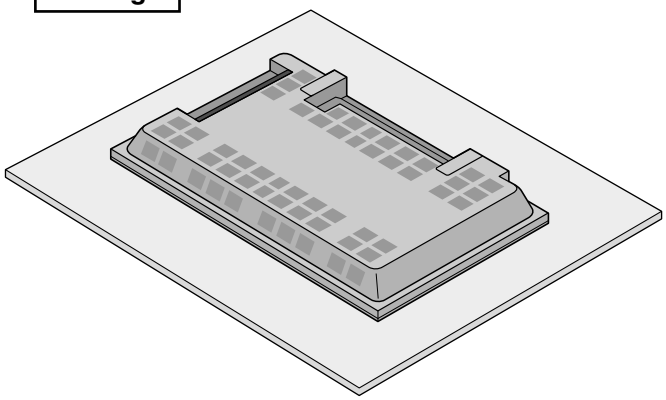
  Product warranty does not cover damage caused by improper installation.

*** Use only Listed Cart or Stand, or mounting kit or stand provided by manufacturer.**

Drawing A

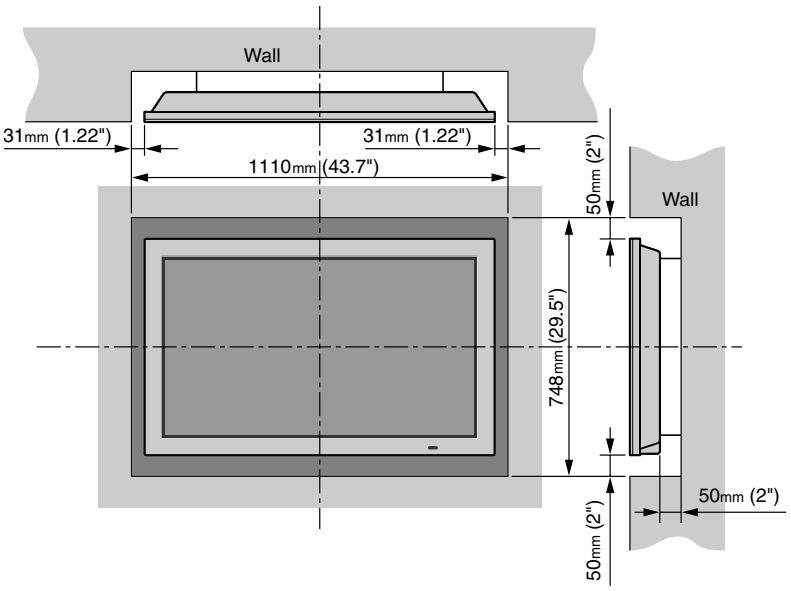


Drawing B



Ventilation Requirements for enclosure mounting

To allow heat to disperse, leave space between surrounding objects as shown on the diagram below when installing.



Introduction

Introduction to the Plasma Monitor

Toshiba plasma monitor is a seamless blend of cutting-edge visual technology and sophisticated design. At 42-inches, with a 16:9 aspect ratio, the Plasma monitor certainly makes a big impression. However, at a mere 3.5 inches/ 89 mm thin, the monitor's sleek techno-art lines blend in well with your environment. Vivid image quality will transform data from any graphic medium from PCs to DVD players- into art. And weighing only 61.8 lbs/ 28.5 kg, it actually can be hung almost anywhere. Toshiba has made sure that a host of multimedia resources can be easily connected and displayed as brilliantly as intended on the plasma monitor.

The features you'll enjoy include:

- 42-inch screen
- 16:9 aspect ratio
- Capsulated Color Filter (CCF) and black matrix
- 3.5 inch / 89 mm thin
- 61.8 lbs/ 28.5 kg light
- High-resolution screen: 853 × 480 pixels
- 160-degrees of off-axis viewing, horizontally and vertically.
- Flicker - and warp - free display provides excellent image geometry even in screen corners
- Not affected by magnetic fields, no color drift or edge distortion.
- VGA, SVGA, XGA, SXGA, UXGA computer signal compatibility
- NTSC, PAL, SECAM, composite and S-Video signal compatibility
- 480P, 1080I, 720P and HDTV signal compatibility
- PCs, VCRs, Laser Disc and DVD player source compatibility
- AccuBlend™ scan conversion automatically converts SVGA, XGA, SXGA and UXGA signals to the panel's native resolution
- Advanced Mass Area Sampling Progressive Scan method is employed.
- RGB input (3*), Video input (3*), DVD/HD input (2*), Audio input (3), External Control input (1)
- AccuColor control system provides user selectable on-screen color temperature settings
- New Drive Technology
- Component video input terminal for DVD, 15.75kHz (Y, C_B, C_R)
- Digital broadcasting source compatibitly
- Seven languages (English, German, French, Italian, Spanish, Swedish, and Japanese)

* You can select RGB source, Component source or Video source for the 5BNC terminal. When selecting an RGB input, the source is switched to the RGB input (3); when selecting a component input, the source is switched to the DVD/HD input (2); when selecting a Video source, the source is switched to the Video input (3).

Contents of the Package

- ☐ Plasma monitor
- ☐ Power cord
- ☐ RGB cable (Mini D-Sub 15-pin to Mini D-Sub 15-pin connector)
- ☐ Remote control with two AAA Batteries
- ☐ User's manual
- ☐ Remote cable
- ☐ Safety metal fittings*
- ☐ Screws for safety metal fitting*
- ☐ Ferrite core (small × 2, large × 2), band

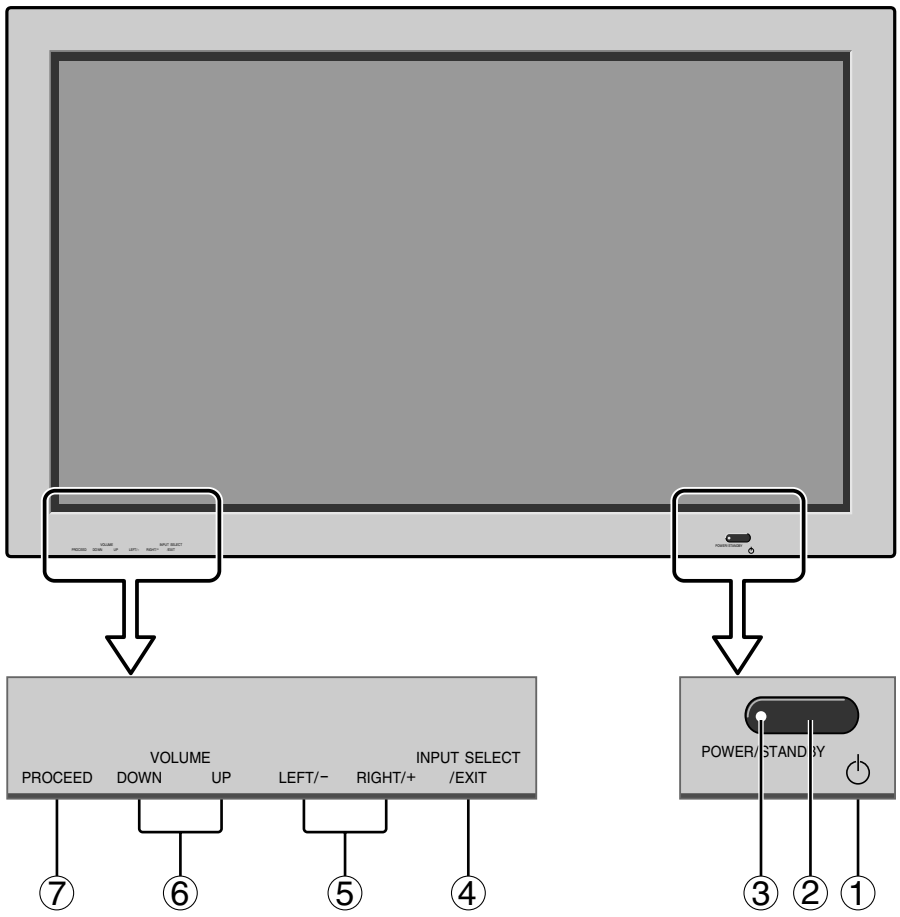
* These are fittings for fastening the unit to a wall to prevent tipping due to external shock when using the stand (option). Fasten the safety fittings to the holes in the back of the monitor using the safety fitting mount screws.

Options

- Wall mount unit
- Ceiling mount unit
- Tilt mount unit
- Stand
- Attachable speakers
- Pole unit
- Horizontal pole mount unit

Part Names and Function

Front View



① **Power**
Turns the monitor's power on and off.

② **Remote sensor window**
Receives the signals from the remote control.

③ **POWER/STANDBY indicator**
When the power is on ..... Lights green.
When the power is in the standby mode ... Lights red.

④ **INPUT SELECT / EXIT**
Switches the input, in the following order.
The available inputs depend on the setting of "BNC SELECT".

RGB: → VIDEO1 → VIDEO2 → HD/DVD/DTV → RGB/PC3 ← RGB/PC2 ← RGB/PC1 ←

COMP.: → VIDEO1 → VIDEO2 → HD1/DVD1/DTV1 → RGB/PC3 ← RGB/PC1 ← HD2/DVD2/DTV2 ←

VIDEO: → VIDEO1 → VIDEO2 → VIDEO3 → RGB/PC3 ← RGB/PC1 ← HD/DVD/DTV ←

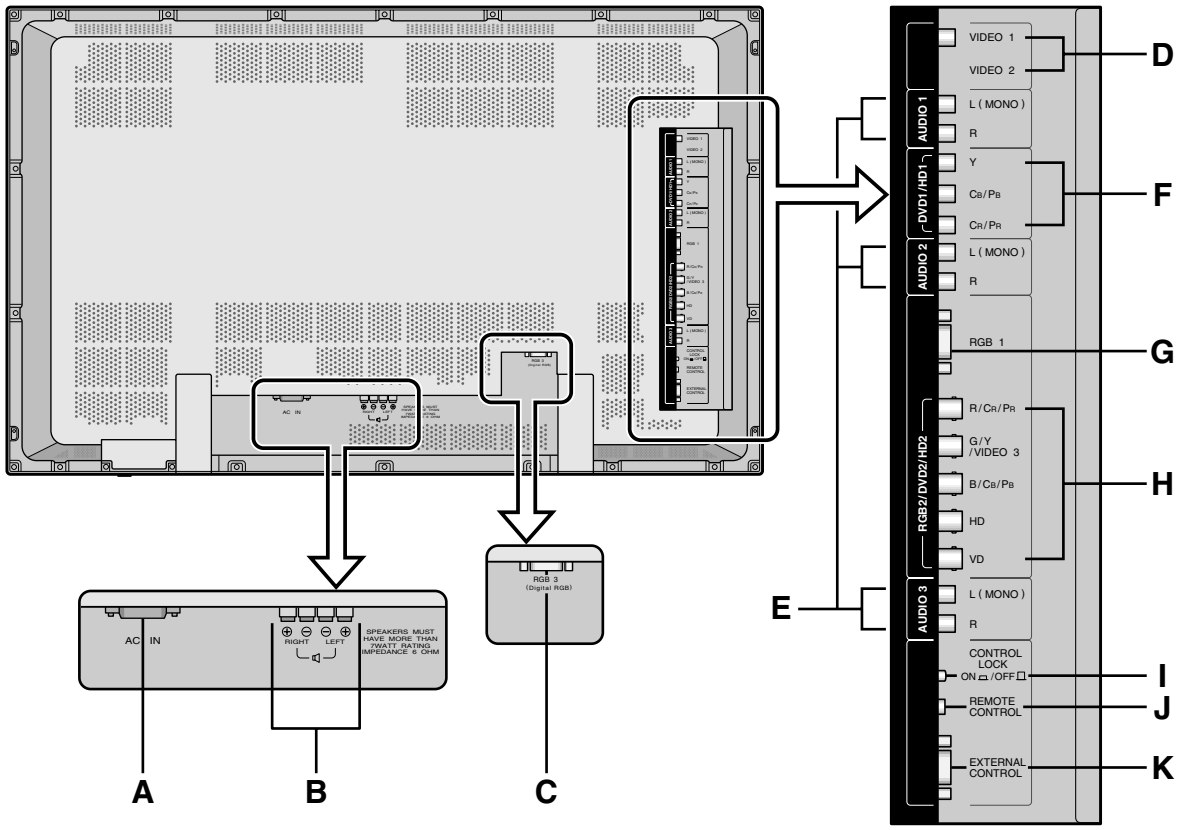
Functions as the EXIT buttons in the On-Screen Menu (OSM) mode.

⑤ **LEFT/– and RIGHT/+**
Enlarges or reduces the image. Functions as the CURSOR (◀ / ▶) buttons in the On-Screen Menu (OSM) mode.

⑥ **VOLUME DOWN and UP**
Adjusts the volume. Functions as the CURSOR (▲/▼) buttons in the On-Screen Menu (OSM) mode.

⑦ **PROCEED**
Sets the On-Screen Menu (OSM) mode and displays the main menu.

Rear View/ Terminal Board



A AC IN
Connect the included power cord here.

B EXT SPEAKER L and R
Connect speakers here. Maintain the correct polarity.

C RGB3 (DVI 29pin)
Inputs a digital RGB signal (TMDS).

D VIDEO1, 2
Connect VCR's, DVD's or Laser Discs, etc. here.

E AUDIO1, AUDIO2, AUDIO3
These are audio input terminals.
The input is selectable. Set which video image to allot them to on the menu screen.

F DVD1 / HD1
Connect DVD's, High Definition or Laser Discs, etc. here.

G RGB1
Inputs the analog RGB signal of personal computer, etc.

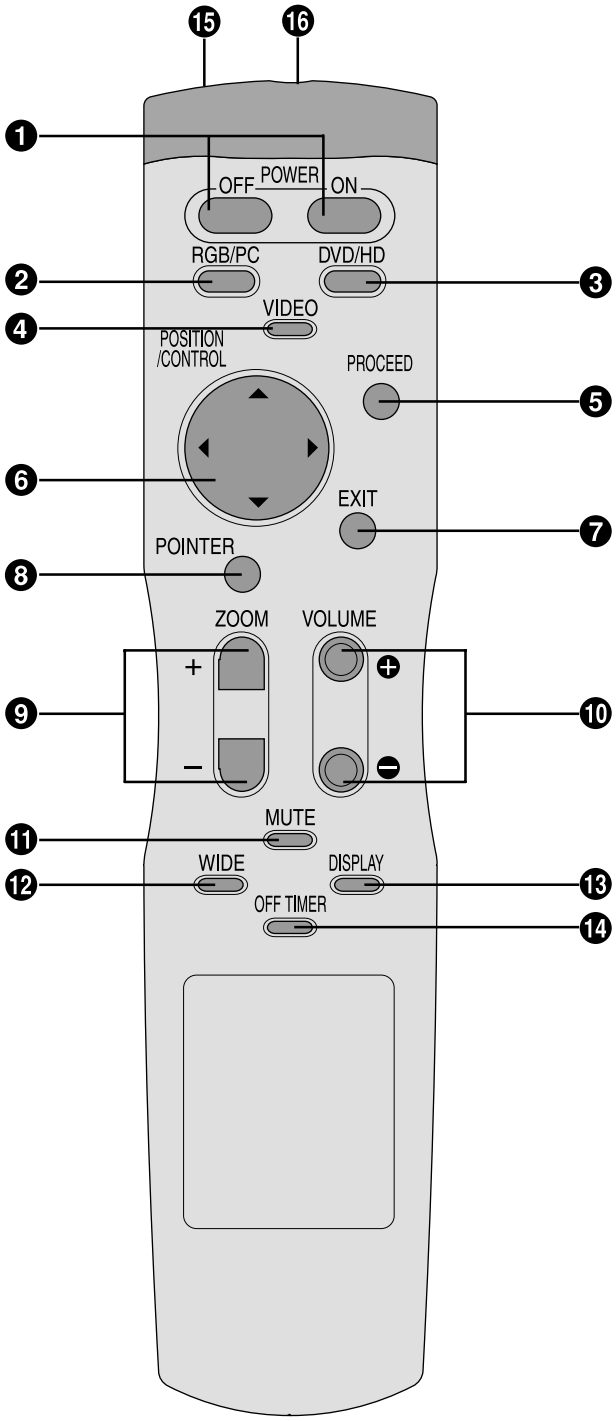
H RGB2/ DVD2/ HD2
RGB2: Inputs the analog RGB signal.
DVD2/ HD2: Connect DVD's, High Definition or Laser Discs, etc. here.
VIDEO3: Connect VCR's, DVD's or Laser Discs, etc. here.

I CONTROL LOCK
When "CONTROL LOCK" is set "ON", the buttons on the set's control panel do not function.

J REMOTE CONTROL
Connect the supplied remote cable here.

K EXTERNAL CONTROL
This terminal is used when power ON/OFF, input selection and AUDIO MUTE and other controls are operated externally (by external control). See also page 39 for external control.

Remote Control



❶ **POWER ON/OFF**
Switches Power ON/OFF.
(This does not operate when POWER/STANDBY indicator of the main unit is off.)

❷ **RGB/PC**
Press this button to select RGB/PC as the source.
The available sources depend on the setting of "BNC SELECT".
RGB: → RGB/PC1 → RGB/PC2 → RGB/PC3

COMP. or VIDEO: → RGB/PC1 → RGB/PC3

RGB/PC can also be selected using the INPUT SELECT button on the monitor.

❸ **DVD / HD**
Press this button to select DVD/HD as the source.
The available sources depend on the setting of "BNC SELECT".
RGB or VIDEO: HD/DVD/DTV

COMP.: → HD1/DVD1/DTV1 → HD2/DVD2/DTV2

DVD/HD can also be selected using the INPUT SELECT button on the monitor.

❹ **VIDEO**
Press this button to select VIDEO as the source.
The available sources depend on the setting of "BNC SELECT".
VIDEO: → VIDEO1 → VIDEO2 → VIDEO3

RGB or COMP.: → VIDEO1 → VIDEO2

VIDEO can also be selected using the INPUT SELECT button on the monitor.

❺ **PROCEED**
Press this button to access the OSM controls.
Press this button during the display of the main menu to go to the sub menu.

❻ **CURSOR (▲ / ▼ / ◀ / ▶)**
Use these buttons to select items or settings and to adjust settings or switch the display patterns.

❼ **EXIT**
Press this button to exit the OSM controls in the main menu. Press this button during the display of the sub menu to return to the main menu.

❽ **POINTER**
Press this button to display the pointer.

❾ **ZOOM (+ /–)**
Enlarges or reduces the image.

❿ **VOLUME (+ /–)**
Adjusts the volume.

⓫ **MUTE**
Mutes the sound.

⓬ **WIDE**
The type of broadcast is detected automatically, and the recommended wide screen is set.

⓭ **DISPLAY**
Displays the source settings on the screen.

⓮ **OFF TIMER**
Activates the off timer for the unit.

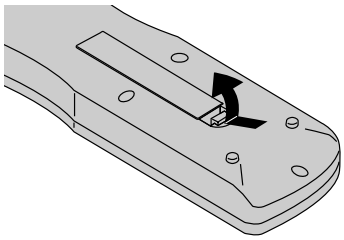
⓯ **Remote control signal transmitter**
Transmits the remote control signals.

⓰ **Remote Jack**
Insert the plug of the supplied remote cable here when using the supplied remote control in the wired condition.

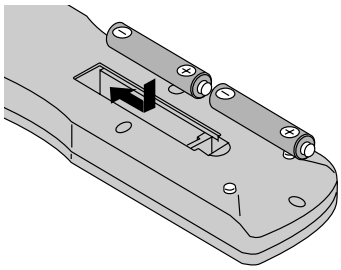
Battery Installation and Replacement

Insert the 2 “AAA” batteries, making sure to set them in with the proper polarity.

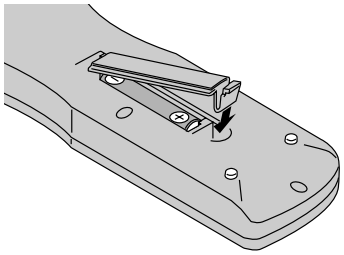
1. Press and open the cover.



2. Align the batteries according to the (+) and (–) indication inside the case.



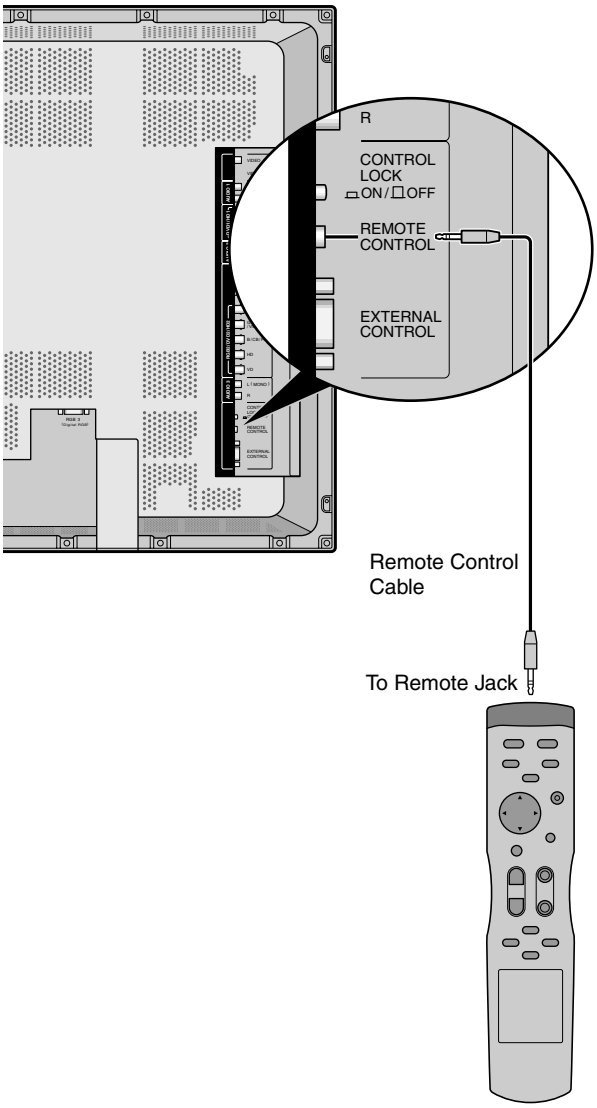
3. Replace the cover.



Using the wired remote control mode

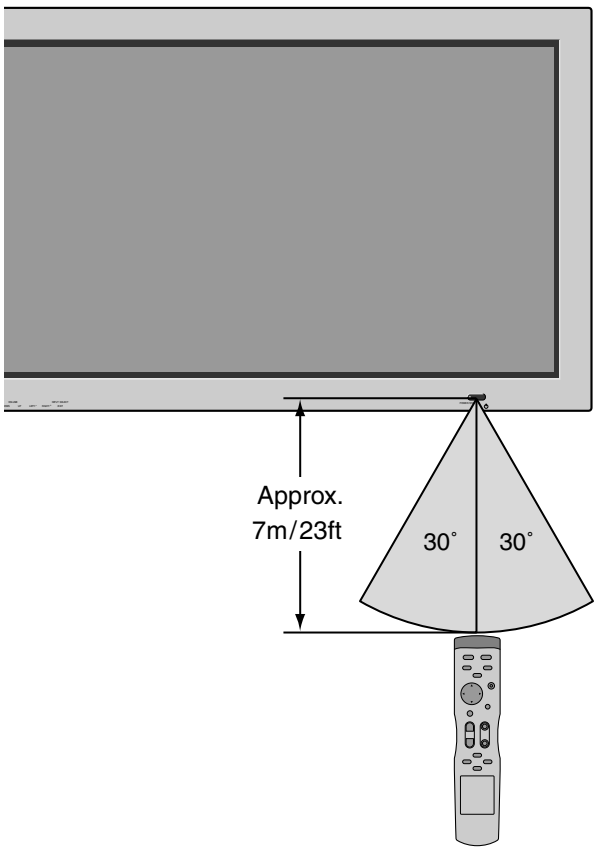
Connect the supplied remote cable to the remote control's remote jack and the "REMOTE CONTROL" terminal on the monitor.

When the cable is connected, the mode automatically switches to wired remote control. When the wired remote control mode is used, the remote control can be operated even if no batteries are loaded.



Operating Range

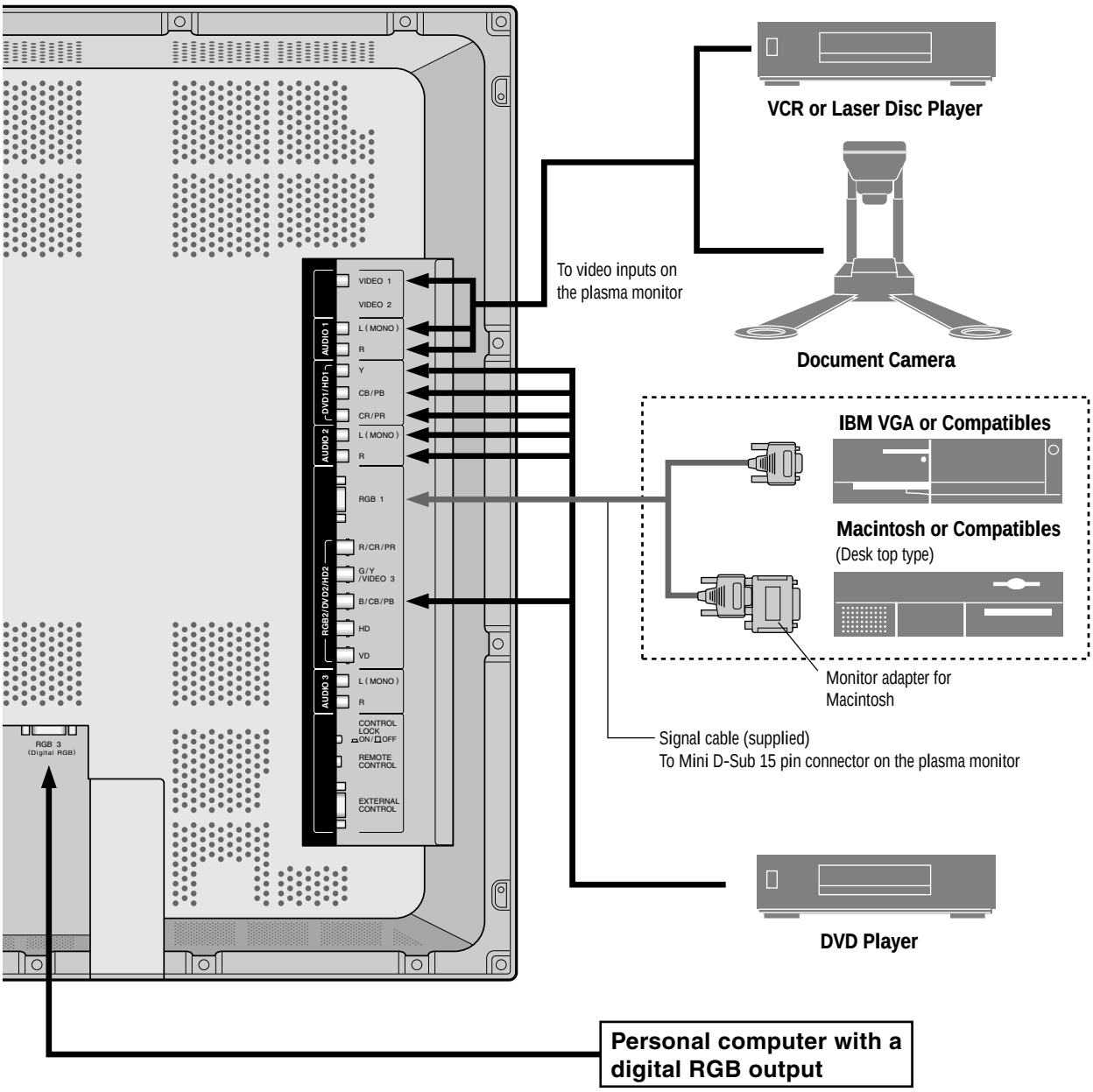
* Use the remote control within a distance of about 7 m/ 23ft. from the front of the monitor's remote control sensor and at horizontal and vertical angles of up to approximately 30°.
* The remote control operation may not function if the monitor's remote control sensor is exposed to direct sunlight or strong artificial light, or if there is an obstacle between the sensor and the remote control.



Handling the remote control

- Do not drop or mishandle the remote control.
- Do not get the remote control wet. If the remote control gets wet, wipe it dry immediately.
- Avoid heat and humidity.
- When not using the remote control for a long period, remove the batteries.
- Do not use new and old batteries together, or use different types together.
- Do not take apart the batteries, heat them, or throw them into a fire.
- When using the remote control in the wireless condition, be sure to unplug the remote cable from the REMOTE CONTROL terminal on the monitor.

Installation



Connecting Your PC or Macintosh Computer

Connecting your PC or Macintosh computer to your plasma monitor will enable you to display your computer's screen image for an impressive presentation. The plasma monitor supports the signals described on page 52.
To connect a PC, Macintosh or compatible graphics adapter, simply:

1. Turn off the power to your plasma monitor and computer.
2. If your PC does not support SXGA/XGA/SVGA/VGA you will need to install an SXGA/XGA/SVGA/VGA graphics board. Consult your computer's owner's manual for your SXGA/XGA/SVGA/VGA configuration. If you need to install a new board, see the manual that comes with your new graphics board for installation instructions.
3. The plasma monitor provides signal compatibility up to VESA 1600×1200 (UXGA). However, it is not recommended to use this resolution due to image readability on the monitors 853×480 native pixel resolution panel.
4. Use the signal cable that's supplied to connect your PC or Macintosh computer to the plasma monitor. For Macintosh, use the monitor adapter to connect to your computer's video port.
5. Turn on the plasma monitor and the computer.
6. If the plasma monitor goes blank after a period of inactivity, it may be caused by a screen saver installed on the computer you've connected to the plasma monitor.

When using a Macintosh with the plasma monitor, the following four display standards are supported using the Macintosh adapter :

13" fixed mode
16" fixed mode
19" fixed mode
21" fixed mode

The 13" fixed mode is recommended for the plasma monitor.

Connections with Equipment that has a Digital Interface

Connections can be made with equipment that is equipped with a digital interface compliant with the DVI (Digital Visual Interface) standard.

* Use a DVI 29-pin signal cable and the ferrite cores (supplied) when making connections to the RGB3 IN (DVI) connector of the main unit.
  Note that the RGB3 IN(DVI) terminal does not support analog RGB input source.

Note:

1. Input TMDS signals conforming to DVI standards. The TMDS input corresponds to 1 link.
2. To maintain display quality, use a cable with a quality prescribed by DVI standards that is within 5 meters in length.

Connecting Your Document Camera

You can connect your plasma monitor to a document camera. To do so, simply:

1. Turn off the power to your plasma monitor and document camera.
2. Use a standard video cable to connect your document camera to the Video input on your plasma monitor.
3. Turn on the plasma monitor and the document camera.

Note: *Refer to your document camera owner's manual for more information about your camera's video output requirements.*

Connecting Your VCR or Laser Disc Player

Use common RCA cables (not provided) to connect your VCR or laser disc player to your plasma monitor. To make these connections, simply:

1. Turn off the power to your plasma monitor and VCR or laser disc player.
2. Connect one end of your RCA cable to the video output connector on the back of your VCR or laser disc player, connect the other end to the Video input on your plasma monitor. Use standard RCA audio patch cords to connect the audio from your VCR or laser disc player to your plasma monitor (if your VCR or laser disc player has this capability). Be careful to keep your right and left channel connections correct for stereo sound.
3. Turn on the plasma monitor and the VCR or laser disc player.

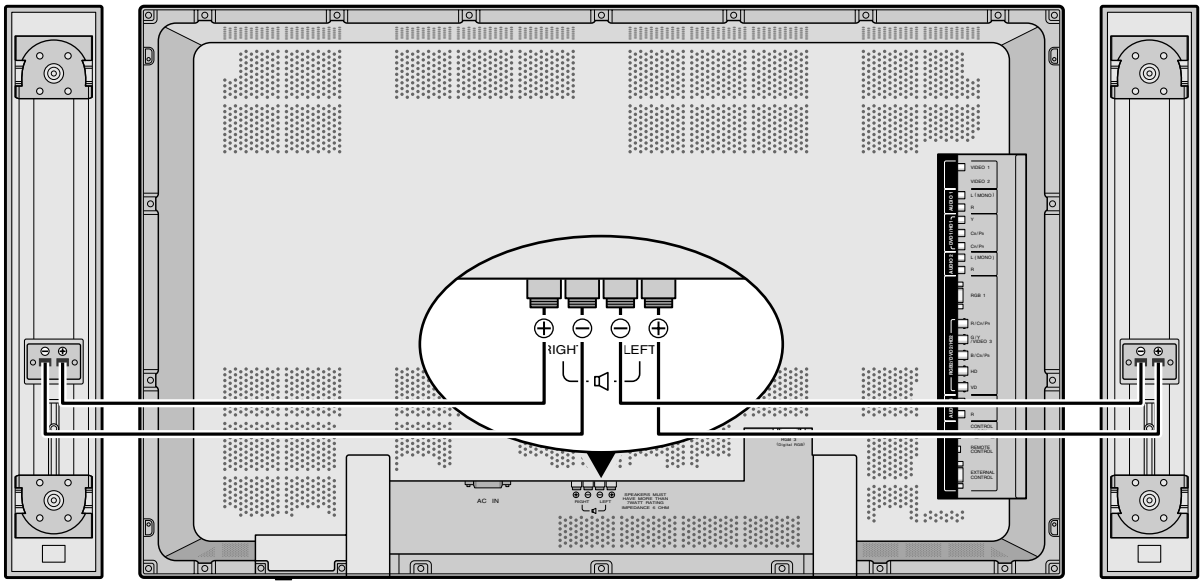
Note: *Refer to your VCR or laser disc player owner's manual for more information about your equipment's video output requirements.*

Connecting Your DVD Player

You can connect your plasma monitor to a DVD player. To do so, simply:

1. Turn off the power to your plasma monitor and DVD player.
2. Use a standard video cable to connect your DVD player to the Y, Cb, and Cr inputs on your plasma monitor. Or use the DVD-player's S-Video output. Use a standard S-Video cable to connect to the S-Video input on the plasma monitor.
3. Turn on the plasma monitor and the DVD player.

Attachable Speaker Connections



Attachable speakers (option) may be connected to the plasma monitor to reproduce sound from VIDEO, DVD or RGB signal sources.

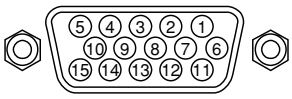
Attachable speakers may be connected directly to the SPEAKERS terminals or indirectly by connecting a stereo system amplifier to the audio outputs.

CAUTION: *Unplug the plasma monitor and all connected components before connecting external speakers. Use only speakers with 6-ohm impedance and a power input rating of 7 watts or more.*

To connect attachable speakers directly to the plasma monitor:

1. Strip the ends of the speaker wires.
2. Press down the tabs below the SPEAKERS terminals, insert the speaker wire and release the tab to secure the speaker wire connection:
   [a] Connect the right speaker (located at right side of the monitor when viewed from the front) positive (+) wire to RIGHT +.
   [b] Connect the right speaker negative (–) wire to RIGHT –.
   [c] Connect the left speaker negative (–) wire to LEFT–.
   [d] Connect the left speaker positive (+) wire to LEFT+.

Pin Assignments and Signal Levels for 15 pin RGB (Analog)

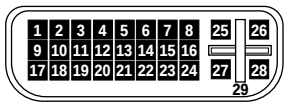


Pin No.	Signal (Analog)
1	Red
2	Green or sync-on-green
3	Blue
4	No connection
5	Ground
6	Red ground
7	Green ground
8	Blue ground
9	No connection
10	Sync signal ground
11	No connection
12	Bi-directional DATA (SDA)
13	Horizontal sync or Composite sync
14	Vertical sync
15	Data clock

Pin Configuration and Signal of the RGB 3 IN Connector (DVI Connector)

The unit is equipped with a type of connector commonly used for both analog and digital.
(Functionally, this cannot be used for an analog input.)
(TMDS can be used for one link only.)

RGB 3



Pin No.	Signal (Digital)
1	T.M.D.S Data 2 -
2	T.M.D.S Data 2 +
3	T.M.D.S Data 2 Shield
4	No connection
5	No connection
6	DDC Clock
7	DDC Data
8	No connection
9	T.M.D.S Data 1 -
10	T.M.D.S Data 1 +
11	T.M.D.S Data 1 Shield
12	No connection
13	No connection
14	+5V Power
15	Ground
16	Hot Plug Detect
17	T.M.D.S Data 0 -
18	T.M.D.S Data 0 +
19	T.M.D.S Data 0 Shield
20	No connection
21	No connection
22	T.M.D.S Clock Shield
23	T.M.D.S Clock +
24	T.M.D.S Clock -
25	No connection
26	No connection
27	No connection
28	No connection
29	No connection

Basic Operations

POWER

To turn the unit ON and OFF:

1. Plug the power cord into an active AC power outlet.
2. Press the POWER ON button (on the remote control) to turn on the unit.

   The monitor's POWER/STANDBY indicator will light up (green) when the unit is on.
3. Press the POWER OFF button (on the remote control or the unit) to turn off the unit.

   The monitor's POWER/STANDBY indicator turns red and the standby mode is set (only when turning off the unit with the remote control).

VOLUME

To adjust the volume:

1. Press and hold the VOLUME ⊕ button (on the remote control or the unit) to increase to the desired level.
2. Press and hold the VOLUME ⊖ button (on the remote control or the unit) to decrease to the desired level.

MUTE

To cancel the sound:

Press the MUTE button on the remote control to cancel the sound; press again to restore.

DISPLAY

To check the settings:

1. The screen changes each time the DISPLAY button is pressed.
2. If the button is not pressed for approximately three seconds, the menu turns off.

DIGITAL ZOOM

Digital zoom specifies the picture position and enlarges the picture.

1. Press the POINTER button to display the pointer. ( )

   To change the size of the picture:
   Press the ZOOM+ button and enlarge the picture. The pointer will change to resemble a magnifying glass. ( )
   A press of the ZOOM- button will reduce the picture and return it to its original size.

   To change the picture position:
   Select the position with the ▲▼◀▶ buttons.
2. Press the POINTER button to delete the pointer.

OFF TIMER

To set the off timer:

The off timer can be set to turn the power off after 30, 60, 90 or 120 minutes.

1. Press the OFF TIMER button to start the timer at 30 minutes.
2. Press the OFF TIMER button to the desired time.
3. The timer starts when the menu turns off.

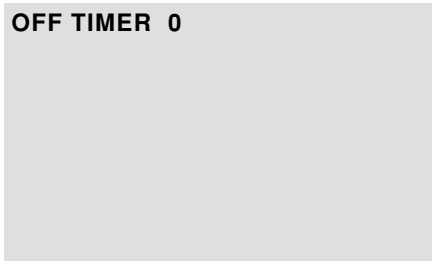
→ 30 → 60 → 90 → 120 → 0

To check the remaining time:

1. Once the off timer has been set, press the OFF TIMER button once.
2. The remaining time is displayed, then turns off after a few seconds.
3. When five minutes remain the remaining time appears until it reaches zero.

To cancel the off timer:

1. Press the OFF TIMER button twice in a row.
2. The off timer is canceled.



Note:

After the power is turned off with the off timer ...
A slight current is still supplied to the monitor. When you are leaving the room or do not plan to use the system for a long period of time, turn off the power of the monitor.

WIDE Operations

Watching with a wide screen (manual)

With this function, you can select one of four screen sizes.

When watching videos or digital video discs

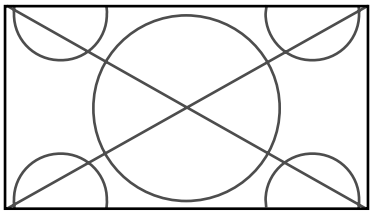
1. Press the WIDE button on the remote control.
2. *Within 3 seconds ...*

   Press the WIDE button again.

   The screen size switches as follows:

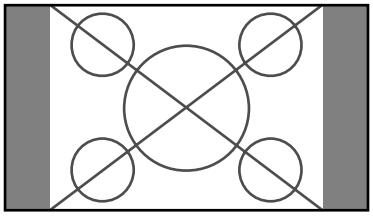
   → ZOOM → NORMAL → FULL → STADIUM →

ZOOM size screen



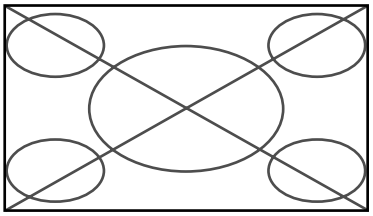
The picture is expanded in the horizontal and vertical direction, maintaining the original proportions.
* Use this for theater size (wide) movies, etc.

NORMAL size screen (4:3)



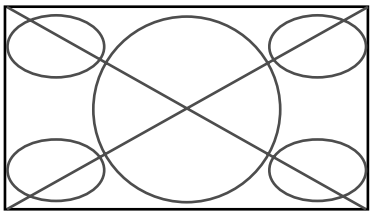
The normal size screen is displayed.
* The picture has the same size as video pictures with a 4 : 3 aspect ratio.

FULL size screen



The image is expanded in the horizontal direction.
* Images compressed in the horizontal direction ("squeezed images") are expanded in the horizontal direction and displayed on the entire screen. (Normal images are expanded in the horizontal direction.)

STADIUM size screen

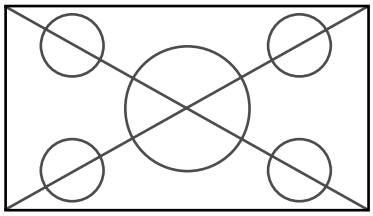


The picture is expanded in the horizontal and vertical directions at different ratios.
* Use this for watching normal video programs (4:3) with a wide screen.

When watching high definition video source

1. Press the WIDE button on the remote control.

FULL size screen (16 : 9)



The full size screen is displayed.
* The picture has the same size as video pictures (16 : 9).

Watching computer images with a wide screen

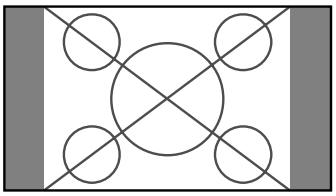
Switch to the wide screen mode to expand the 4 : 3 image to fill the entire screen.

1. Press the WIDE button on the remote control.
2. *Within 3 seconds ...*

   Press the WIDE button again.
   The screen size switches as follows:

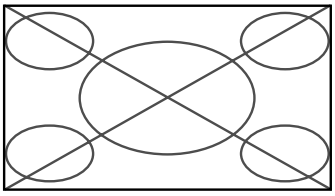
   → **NORMAL** → **FULL**

NORMAL size screen (4:3 or SXGA 5:4)



The picture has the same size as the normal computer image.

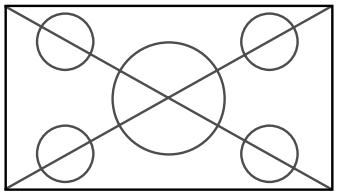
FULL size screen



The image is expanded in the horizontal direction.

When wide signals are input.

FULL size screen



Information

■ Supported resolution

See page 52 for details on the display output of the various VESA signal standards supported by the monitor.

■ When 852 (848) dot × 480 line wide VGA* signals with a vertical frequency of 60 Hz and horizontal frequency of 31.7 (31.0) kHz are input

Select an appropriate setting for RGB SELECT mode referring to the"Table of Signals Supported" on page 52.

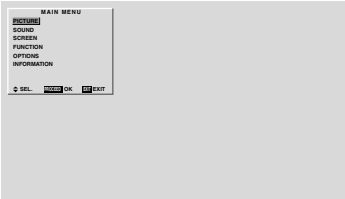
* " IBM PC/AT" and "VGA" are registered trademarks of IBM, Inc. of the United States.

OSM(On Screen Menu) Controls

Menu Operations

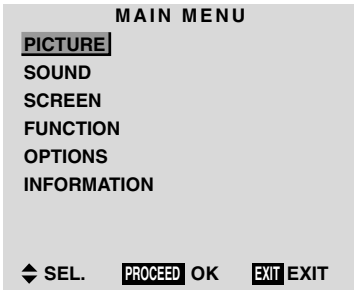
The OSM window is displayed with respect to the screen as shown on the diagram.

* Depending on the screen's mode, the OSM may be displayed differently.
  In the explanation, the OSM section is shown close up.



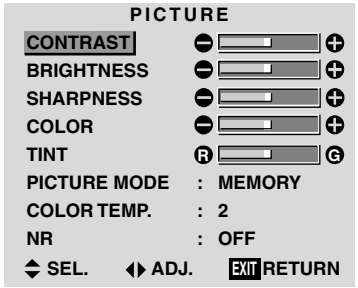
The following describes how to use the menus and the selected items.

1. Press the PROCEED button on the remote control to display the MAIN MENU.



2. Press the cursor buttons ▲ ▼ on the remote control to highlight the menu you wish to enter.

3. Press the PROCEED button on the remote control to select a submenu or item.



4. Adjust the level or change the setting of the selected item by using the cursor buttons ◀ ▶ on the remote control.

5. The change is stored until you adjust it again.

6. Repeat steps 2 – 5 to adjust an additional item, or press the EXIT button on the remote control to return to the main menu.

Note: *The main menu disappears by pressing the EXIT button.*

Main menu	Sub menu	Functions	Default	Reset
PICTURE	CONTRAST	Adjusts the contrast.	Center	Yes
	BRIGHTNESS	Adjusts the brightness.	Center	Yes
	SHARPNESS	Adjusts the sharpness.	Center/1	Yes
	COLOR	Adjusts the color.	Center	Yes
	TINT	Adjusts the tint.	Center	Yes
	PICTURE MODE	Sets the picture mode according to the VIDEO environment and image software.	MEMORY	Yes
	COLOR TEMP	Adjusts the color temperature and white balance.	2	Yes
	NR	Reduces noise visible in image.	OFF	Yes

Main menu	Sub menu	Functions	Default	Reset
SOUND	BASS	Sets the bass.	Center	Yes
	TREBLE	Sets the treble.	Center	Yes
	BALANCE	Sets the left/right balance.	Center	Yes

Main menu	Sub menu	Functions	Default	Reset
SCREEN	V-POSITION	Adjusts the vertical position.	Center	Yes
	H-POSITION	Adjusts the horizontal position.	Center	Yes
	V-HEIGHT	Adjusts the vertical size.	Min	Yes
	H-WIDTH	Adjusts the horizontal size.	Min	Yes
	AUTO PICTURE	Turn this on to have the monitor automatically adjust “FINE PICTURE” and “PICTURE ADJ”.	OFF*1	No
	FINE PICTURE	Adjusts for flickering on the computer image.	Min*1	Yes
	PICTURE ADJ.	Adjusts for striped patterns on the computer image.	Center*1	Yes

Main menu	Sub menu	Functions	Default	Reset
FUNCTION	OSM	Turns the on-screen menu (screen mode, etc.) off (when set to “OFF”). When set to “ON”, the on-screen menu is displayed.	ON	Yes
	OSM ADJ.	Adjusts the vertical and horizontal positions of the menu display.	1	Yes
	POWER MGT	Sets the monitor for use as an energy-saving display when used with a computer.	OFF	Yes
	GRAY LEVEL	In case of 4 : 3, sets the luminance of both sides.	3	Yes
	CINEMA MODE	Sets the picture to suit the movie.	ON	Yes
	RGB3 ADJ.	Adjusts the picture when the picture input from the RGB3 input terminal is distorted.	1	Yes
	LONG LIFE	Sets the picture to reduce burn-in of the display.	*2	Yes
	RESET	Resets all the settings (PICTURE, SOUND, SCREEN, FUNCTION, etc.) to the factory default values.	—	—

Main menu	Sub menu	Functions	Default	Reset
OPTIONS	AUDIO INPUT	Sets the allocation of the audio connectors.	*3	Yes
	BNC SELECT	Sets the BNC connectors.	RGB	Yes
	RGB SELECT	Sets the appropriate mode for the computer image. RGB (VGA signals), VIDEO (Moving picture), WIDE (WIDE VGA) DTV.	AUTO	Yes
	HD SELECT	Sets the digital broadcasting (1080A,1080B) or the High Vision (1035I).	1080B	No

Main menu	Sub menu	Functions	Default	Reset
INFORMATION	FREQUENCY	Used to check the frequency and synchronizing polarities of the signal currently being inputted.	—	—
	LANGUAGE	Sets the language of the menus (Japanese, English, German, French, Swedish, Italian or Spanish).	English	No
	COLOR SYSTEM	Sets the VIDEO format (AUTO1, AUTO2, PAL, PAL-M, PAL-N, PAL60, SECAM, 4.43 NTSC or 3.58 NTSC).	AUTO1	No

*1 RGB/PC only.
*2 PLE: AUTO ORBITER: OFF INVERSE: OFF SCREEN WIPER: OFF
*3 AUDIO1: VIDEO1 AUDIO2: HD/DVD1 AUDIO3: RGB1

Picture Settings Menu

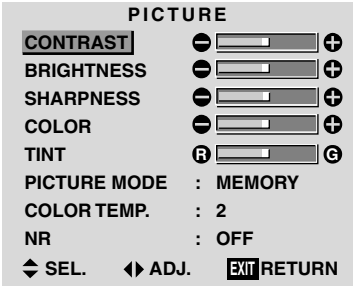
Adjusting the picture

The contrast, brightness, sharpness, color and tint can be adjusted as desired.

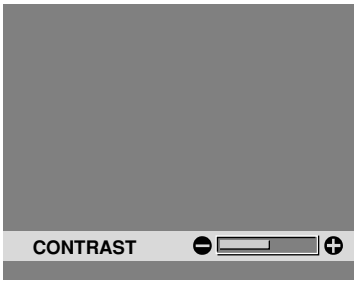
Example: Adjusting the contrast

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "PICTURE", then press the PROCEED button. The "PICTURE" screen appears.
2. Use the ▲ and ▼ buttons to select "CONTRAST".



3. Use the ◀ and ▶ buttons to adjust the contrast.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

4. *Once the adjustment is completed ...*

   Press the EXIT button to return to the main menu.

   To delete the main menu, press the EXIT button once more.

Note: *If "CAN NOT ADJUST" appears ...*
When trying to enter the PICTURE submenu, make sure PICTURE MODE is set to MEMORY.

Information

■ Picture adjustment screen

CONTRAST .... Changes the picture's contrast.
BRIGHTNESS . Changes the picture's brightness.
SHARPNESS .. Changes the picture's sharpness. Adjusts picture detail of VIDEO display.
COLOR ..... Changes the color density.
TINT ..... Changes the picture's tint. Adjust for natural colored skin, background, etc.

■ Adjusting the computer image

Only the contrast and brightness can be adjusted when a computer signal is connected.

■ Restoring the factory default settings

Select "RESET" under the "PICTURE MODE" settings.

Setting the picture mode according to the brightness of the room

There are four picture modes that can be used effectively according to the environment in which you are viewing the display.

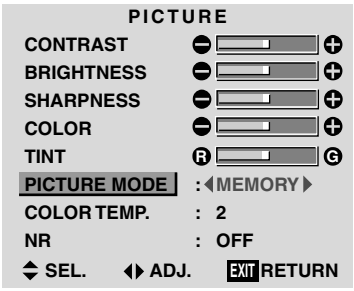
Example: Setting the “THEATER” mode

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “PICTURE”, then press the PROCEED button.

   The “PICTURE” screen appears.

2. Use the ▲ and ▼ buttons to select “PICTURE MODE”.

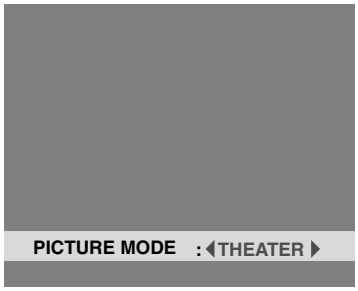


3. *To set to “THEATER” ...*

   Use the ◀ and ▶ buttons to select “THEATER”.

   The mode switches as follows when the ◀ and ▶ buttons are pressed:

   → **MEMORY ↔ THEATER ↔ NORMAL ↔ RESET** ←



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

4. *Once the adjustment is completed ...*

   Press the EXIT button to return to the main menu. To delete the main menu, press the EXIT button once more.

Information

■ Types of picture modes

MEMORY ..... The last picture adjustments are stored here.

THEATER ..... Set this mode when watching video in a dark room.
This mode provides darker, finer pictures, like the screen in movie theaters.
CONTRAST = 80% for RESET mode
BRIGHTNESS = 95% for RESET mode

NORMAL ..... Set this mode when watching video in a bright room.
This mode provides dynamic pictures with distinct differences between light and dark sections.
CONTRAST = 96% for RESET mode

RESET ..... Use this to reset the picture to the factory default settings.

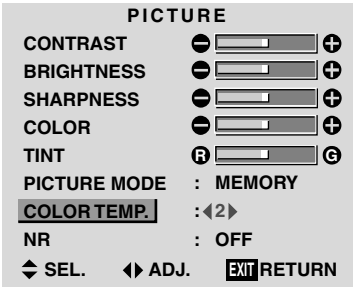
Setting the color temperature

Use this procedure to set color tone produced by the plasma display.

Example: Setting “1”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “PICTURE”, then press the PROCEED button.
   The “PICTURE” screen appears.
2. Use the ▲ and ▼ buttons to select “COLOR TEMP.”.

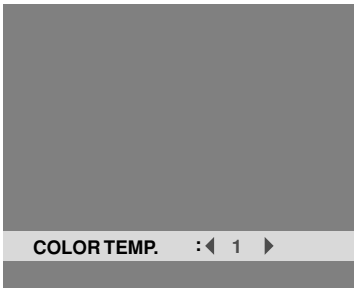


3. Use the ◀ and ▶ buttons to select “1”.

   The mode switches as follows when the ◀ and ▶ buttons are pressed:

   → 1 ↔ 2 ↔ 3 ↔ PRO ←

* See page 21 to set “PRO”.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

4. *Once the setting is completed...*

   Press the EXIT button to return to the main menu.

   To delete the main menu, press the EXIT button once more.

Information

■ Setting the color temperature

1 ..... High (bluer)
2 ..... Middle (Standard)
3 ..... Low (redder)

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

Adjusting the color to the desired quality

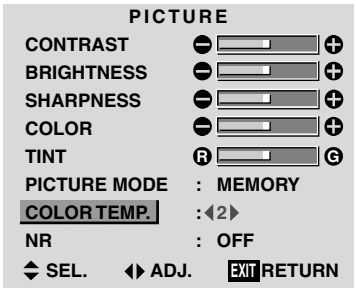
Use this procedure to adjust the white balance for bright pictures and dark pictures to achieve the desired color quality.

Example: Adjusting the “WHITE BALANCE”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “PICTURE”, then press the PROCEED button.
   The “PICTURE” screen appears.

2. Use the ▲ and ▼ buttons to select “COLOR TEMP.”.



3. Use the ◀ and ▶ buttons to select “PRO”.

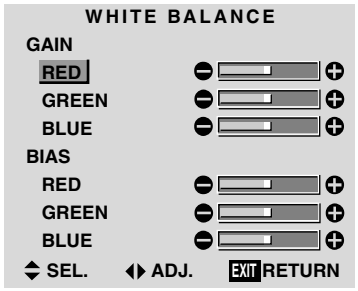
   The mode switches as follows when the ◀ and ▶ buttons are pressed:

   ↱ 1 ↔ 2 ↔ 3 ↔ PRO ↰

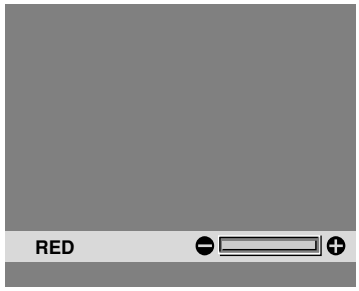
* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

4. Press the PROCEED button.
   The “WHITE BALANCE” screen appears.

5. Use the ▲ and ▼ buttons to select “RED-GAIN”.



6. Adjust the white balance using the ◀ and ▶ buttons.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

7. *Once the adjustment is completed...*
   Press the EXIT button several times to return to the main menu. To delete the main menu, press the EXIT button once more.

Information

■ Adjusting the white balance

RGB-GAIN ..... White balance adjustment for signal level

RGB-BIAS ..... White balance adjustment for black level

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

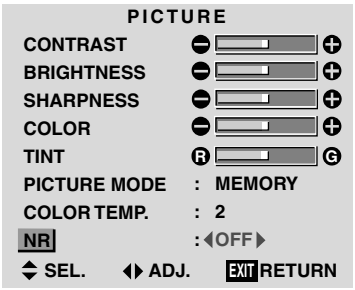
Reducing noise in the picture

Use these settings if the picture has noise due to poor reception or when playing video tapes on which the picture quality is poor.

Example: Setting “NR-3”

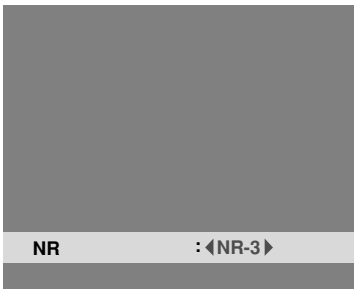
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “PICTURE”, then press the PROCEED button.
   The “PICTURE” screen appears.
2. Use the ▲ and ▼ buttons to select “NR”.



3. Use the ◀ and ▶ buttons to select “NR-3”.
   The mode switches as follows when the ◀ and ▶ buttons are pressed:

→ OFF ↔ NR-1 ↔ NR-2 ↔ NR-3 ←



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ NR

* “NR” stands for Noise Reduction.
* This function reduces noise in the picture.

■ Types of noise reduction

There are three types of noise reduction. Each has a different level of noise reduction.
The effect becomes stronger as the number increases (in the order NR-1 → NR-2 → NR-3).
OFF ..... Turns the noise reduction function off.

Sound Settings Menu

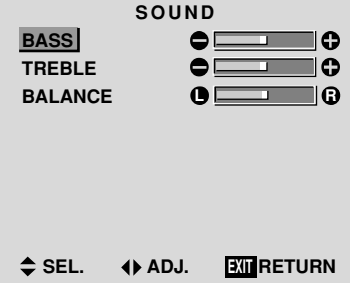
Adjusting the treble, bass and left/right balance

The treble, bass and left/right balance can be adjusted to suit your tastes.

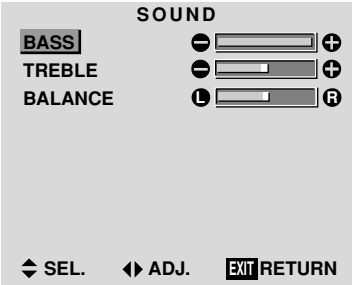
Example: Adjusting the bass

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "SOUND", then press the PROCEED button.
   The "SOUND" screen appears.
2. *To adjust the bass ...*
   Use the ▲ and ▼ buttons to select "BASS".



3. Adjust the bass using the ◀ and ▶ buttons.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

To continue adjusting the sound ...
Repeat from step 2.

4. *Once the adjustment is completed ...*
   Press the EXIT button to return to the main menu. To delete the main menu, press the EXIT button once more.

Note : *If "CAN NOT ADJUST" appears...*
Set "AUDIO INPUT" on the OPTION menu correctly.

Information

■ Sound settings menu

BASS ..... Changes the level of low frequency sound.
TREBLE ..... Changes the level of high frequency sound.
BALANCE ..... Changes the balance of the left and right channels.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

Screen Settings Menu

Adjusting the Position, Size, Fine Picture, Picture Adj

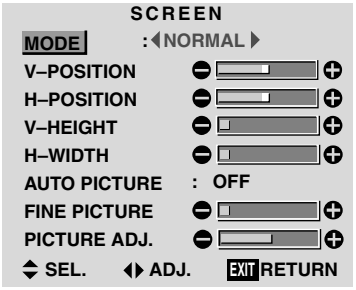
The position of the image can be adjusted and flickering of the image can be corrected.

Example: Adjusting the vertical position in the normal mode

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "SCREEN", then press the PROCEED button. The "SCREEN" menu appears.

   Default settings (when RGB/PC is selected)



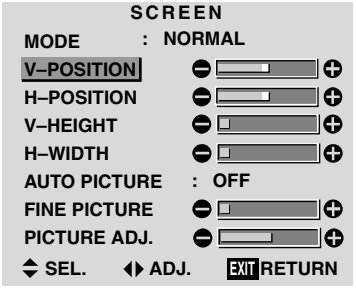
   * The settings on the SCREEN menu are not preset at the factory.

   To select a mode ...
   Use the ◀ and ▶ buttons to select a mode.
   The mode switches as follows when the ◀ and ▶ buttons are pressed:

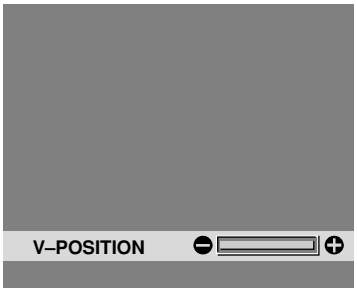
   → NORMAL ↔ FULL ←

   * The mode can also be switched by pressing the "WIDE" button on the remote control.

2. *To adjust the vertical position ...*
   Use the ▲ and ▼ buttons to select "V-POSITION".



3. Adjust using the ◀ and ▶ buttons.



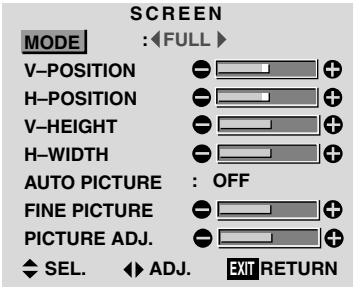
   * If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

   To continue making other computer image adjustments ...
   Repeat from step 2.

4. *Once all adjustments are completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ When "AUTO PICTURE" is "OFF"



When Auto Picture is off, the Fine Picture and the Picture ADJ. items are displayed so that you can adjust them.

Information

■ Adjusting the Auto Picture

ON ..... The Picture ADJ and Fine Picture adjustments are made automatically.
OFF ..... The Picture ADJ and Fine Picture adjustments are made manually.

■ Adjusting the position of the image

V-POSITION ... Adjusts the vertical position of the image.
H-POSITION ... Adjusts the horizontal position of the image.
V-HEIGHT ..... Adjusts the vertical size of the image. (Except for STADIUM mode)
H-WIDTH ..... Adjusts the horizontal size of the image. (Except for STADIUM mode)
FINE PICTURE* .. Adjusts for flickering.
PICTURE ADJ* .... Adjusts for striped patterns on the image.

* The Picture ADJ and Fine Picture features are available only when the "Auto Picture" is off.
* The AUTO PICTURE, FINE PICTURE and PICTURE ADJ. are not available for VIDEO and HD/ DVD source.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults except for Auto Picture.

Function Settings Menu

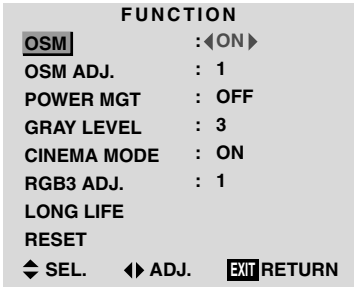
Setting the on-screen menu

When using the monitor for presentations, etc., the monitor can be set so that the input source, screen mode, etc., do not appear.

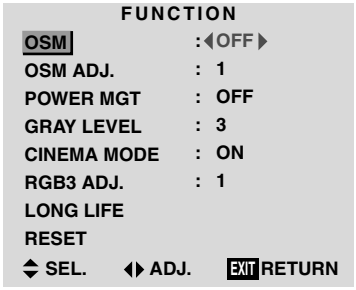
Example: Turning the on-screen menu mode off

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "OSM".



3. *To turn the on-screen menu mode off ...*
   Use the ◀ and ▶ buttons to select "OFF".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   ON ↔ OFF



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ OSM modes

ON ..... The on-screen menu appears.
OFF ..... The on-screen menu does not appear.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

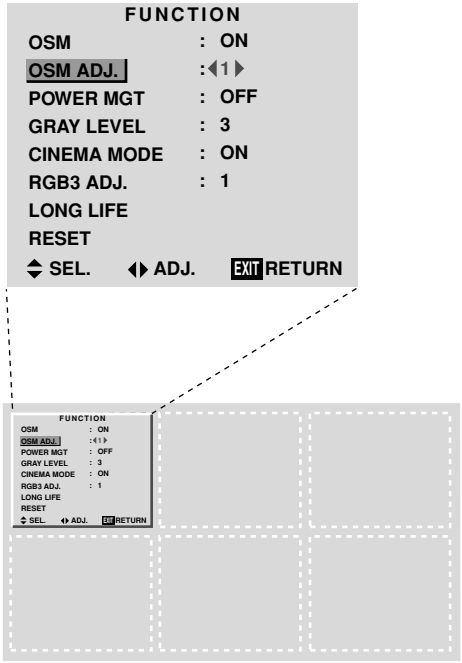
Adjusting the position of the menu display

Use these operations to adjust the position of the menus that appear on the screen.

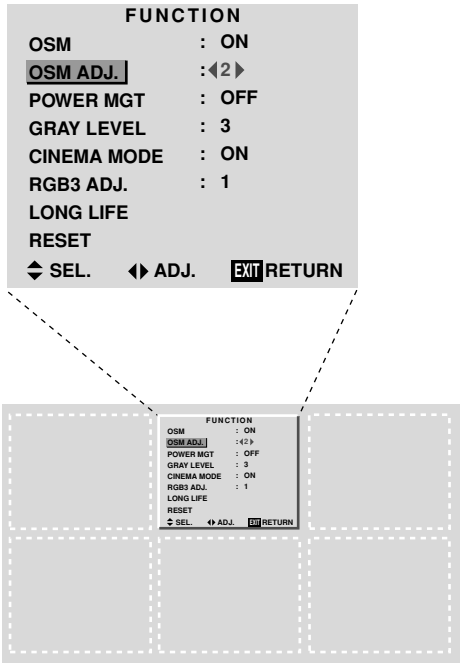
Example: Adjusting the position of the menu display

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “FUNCTION”, then press the PROCEED button.
   The “FUNCTION” menu appears.
2. Use the ▲ and ▼ buttons to select “OSM ADJ.”



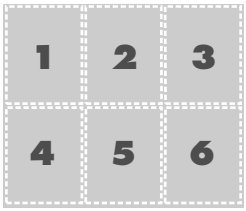
3. *To adjust the position...*
   Adjust using the ◀ and ▶ buttons.



4. *Once all adjustments are completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Adjusting the position of the menu display



The position can be set between 1 and 6.

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

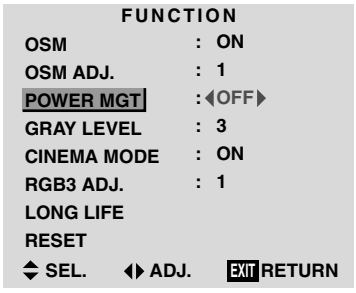
Setting the power management for computer images

This energy-saving (power management) function automatically reduces the monitor's power consumption if no operation is performed for a certain amount of time.

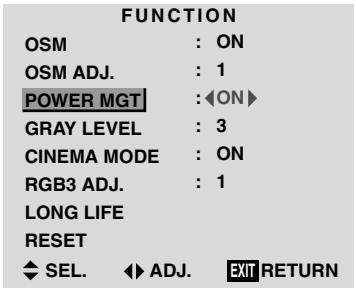
Example: Turning the power management function on

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "POWER MGT".



3. *To turn the power management function on ...*
   Use the ◀ and ▶ buttons to select "ON".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   ON ↔ OFF



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Power management function

* The power management function automatically reduces the monitor's power consumption if the computer's keyboard or mouse is not operated for a certain amount of time. This function can be used when using the monitor with a computer conforming to the VESA DPMS format.
* If the computer's power is not turned on or if the computer and selector tuner are not properly connected, the system is set to the off state.
* For instructions on using the computer's power management function, refer to the computer's operating instructions.

■ Power management settings

ON ..... In this mode the power management function is turned on.
OFF ..... In this mode the power management function is turned off.

■ Power management function and POWER/STANDBY indicator

The POWER/STANDBY indicator indicates the status of the power management function. See page 28 for indicator status and description.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

POWER/STANDBY indicator

Power management mode	POWER/STANDBY indicator	Power management operating status	Description	Turning the picture back on
On	Green	Not activated.	Horizontal and vertical synchronizing signals are present from the computer.	Picture already on.
Standby	Orange	Activated.	No horizontal synchronizing signals are sent from the computer.	Operate the keyboard or mouse. The picture reappears immediately.
Suspend	Red	Activated.	No vertical synchronizing signals are sent from the computer.	Operate the keyboard or mouse. The picture reappears, but more time is required than from the standby mode.
Off	Red	Activated.	No horizontal and vertical synchronizing signals are sent from the computer.	Operate the keyboard or mouse. The picture reappears, but more time is required than from the standby mode or suspend mode.

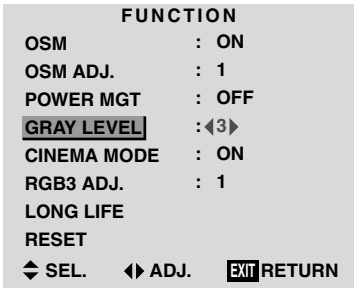
Setting the gray level for the sides of the screen

Use this procedure to set the gray level for the parts on the screen on which nothing is displayed when the screen is set to the 4:3 size.

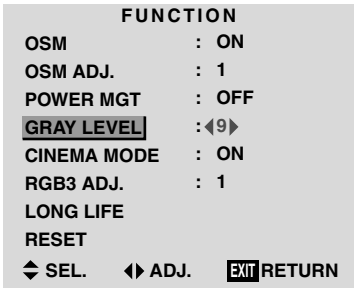
Example: Adjusting the “GRAY LEVEL”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “FUNCTION”, then press the PROCEED button.
   The “FUNCTION” screen appears.
2. Use the ▲ and ▼ buttons to select “GRAY LEVEL”.



3. *To adjust the “GRAY LEVEL”...*
   Use the ◀ and ▶ buttons to adjust the GRAY LEVEL.



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ GRAY LEVEL

This adjusts the brightness of the black (the gray level) for the sides of the screen.
The standard is 0 (black). The level can be adjusted from 0 to 15. The factory setting is 3 (dark gray).

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

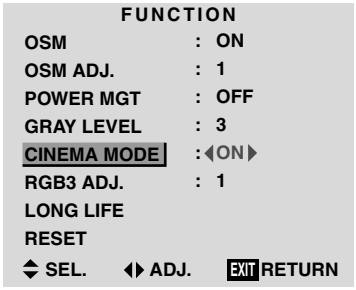
Setting the picture to suit the movie

The film image is automatically discriminated and projected in an image mode suited to the picture.
[NTSC, PAL, PAL60, 480I (60Hz), 525I (60Hz), 576I (50Hz), 625I (50Hz), 1035I (60Hz), 1080I (60Hz) only]

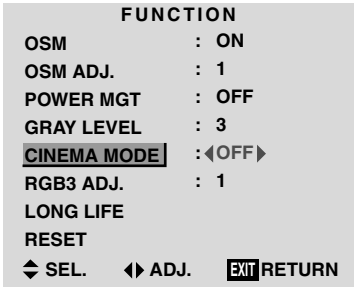
Example: Setting the “CINEMA MODE” to “OFF”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “FUNCTION”, then press the PROCEED button.
   The “FUNCTION” screen appears.
2. Use the ▲ and ▼ buttons to select “CINEMA MODE”.



3. *To set the CINEMA MODE to “OFF” ...*
   Use the ◀ and ▶ buttons to select “OFF”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ CINEMA MODE

ON ..... Automatic discrimination of the image and projection in cinema mode.
OFF ..... Cinema mode does not function.

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

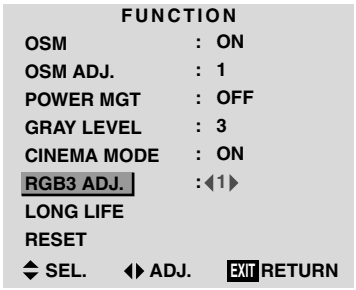
Setting RGB3 ADJ.

When the picture input from the RGB3 input terminal is distorted, select the most appropriate setting from among "1", "2", and "3".

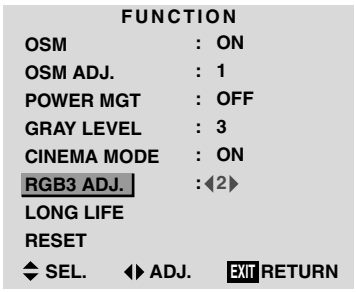
Example: Setting "2"

Press the PROCEED button on the remote control to display MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "RGB3 ADJ.".



3. *To select "2"...*
   Use the ◀ and ▶ buttons to select "2".
   The mode switches as follows each time the ◀ or ▶ buton is pressed:
   → **1** ↔ **2** ↔ **3** ←



4. *Once the setting is completed...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ When you adjust the RGB3 ADJ.

The position of the menu display will change. In such a case, be sure to adjust the position.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

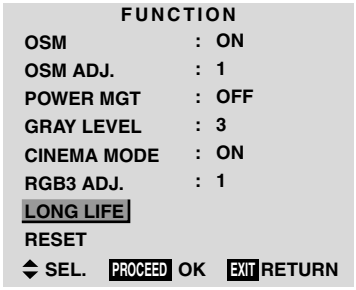
Reducing burn-in of the screen

The brightness of the screen, the position of the picture, positive/negative mode and screen wiper are adjusted to reduce burn-in of the screen.

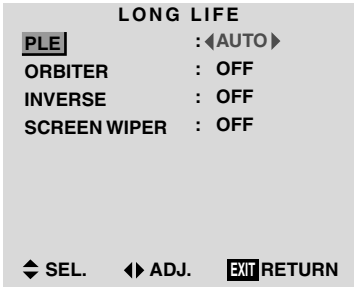
Example: Setting "PLE" to "LOCK"

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then proceed as follows.

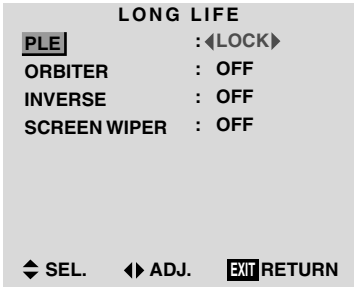
1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "LONG LIFE", then press the PROCEED button.



   The "LONG LIFE" screen appears.
3. Use the ▲ and ▼ buttons to select "PLE".



4. Use the ◀ and ▶ buttons to select "LOCK".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   AUTO ↔ LOCK



5. *Once the setting is completed...*
   Press the EXIT button to return to the FUNCTION menu.
   To exit the main menu, press the EXIT button twice.

Information

■ PLE

AUTO ..... The brightness of the screen is adjusted automatically to suit the picture quality.
LOCK ..... The brightness level is set to minimum.

■ ORBITER

OFF ..... Orbiter mode does not function.
ON ..... The picture moves around the screen intermittently.

■ INVERSE

OFF ..... Inverse mode does not function.
ON ..... The picture is displayed alternately between positive image and negative image.
You can set the time by pressing the PROCEED button while "ON" is set.
WT ..... The entire screen turns white.
You can set the time by pressing the PROCEED button while "ON" is set.

■ SCREEN WIPER

OFF ..... Screen wiper mode does not function.
ON ..... Repeatedly moves the white vertical bar from the left end of the screen to the right end at a constant speed.
You can set the time by pressing the PROCEED button while "ON" is set.

■ Restoring the factory default settings

Select "RESET" from the function menu. Note that this also restores other settings to the factory defaults.

* Only the PLE and ORBITER can be adjusted when a RGB signal is connected.

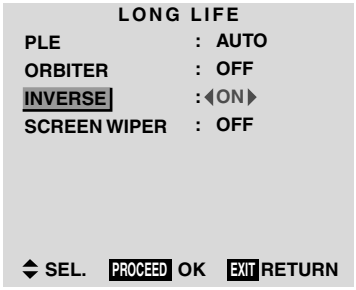
Setting the time for "INVERSE"

Set the "INVERSE" or "WHITE" display time and the "WAITING TIME".

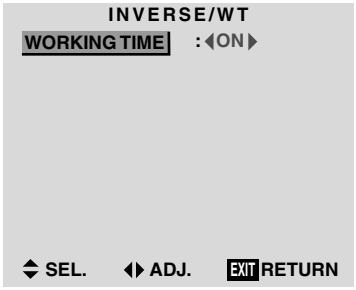
Example: Setting so that the INVERSE mode starts in 30 minutes and proceeds for one and a half hours.

Perform Steps 1-2 on Page 30, then

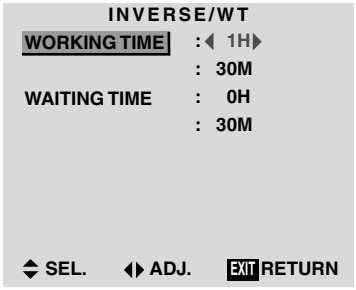
3. Use the ▲ and ▼ buttons to select "INVERSE", then use the ◀ and ▶ buttons to select "ON".



4. Press the PROCEED button.
   The "INVERSE/WT" screen appears.



5. Adjust the time using the ◀ and ▶ buttons and the ▲ and ▼ buttons.
   The mode switches as follows each time the ◀ or ▶ button is pressed.



The 1st line of the "WORKING TIME":

→ **ON or 0H ↔ 1H ↔ 2H ↔ 3H ↔ ... ↔ 12H** ←

* The "WORKING TIME" (minutes) and "WAITING TIME" cannot be set when the "WORKING TIME" is "ON".

The 2nd line of the “WORKING TIME”:

→ 0M ↔ 3M ↔ 6M ↔ 9M ↔ ... ↔ 57M ←

The 1st line of the “WAITING TIME”:

→ 0H ↔1H ↔ 2H ↔ 3H ↔ ... ↔ 12H ←

The 2nd line of the “WAITING TIME”:

→ 0M ↔ 3M ↔ 6M ↔ 9M ↔ ... ↔ 57M ←

6. *Once the setting is completed...*
   Press the EXIT button several times to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Setting the time

WORKING TIME

Set the length of time the “INVERSE/WT” mode lasts. When the WORKING TIME is set to “ON”, the “INVERSE/WT” mode stays in the on state.

WAITING TIME

Set the length of time until the “INVERSE/WT” mode starts.

* The “WORKING TIME” and “WAITING TIME” can be set for up to 12 hours and 45 minutes in units of 3 minutes.

■ To select “ON” for the “WORKING TIME”...

Set the hours of the WORKING TIME to 0H and the minutes to 0M. “ON” will be displayed.

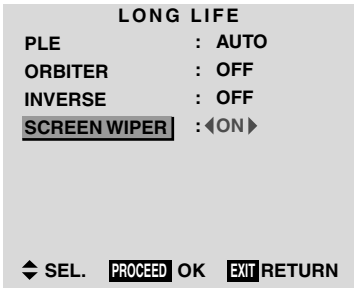
Setting the time for “SCREEN WIPER”

Set the “SCREEN WIPER” operation time, “WAITING TIME”, and “SPEED”.

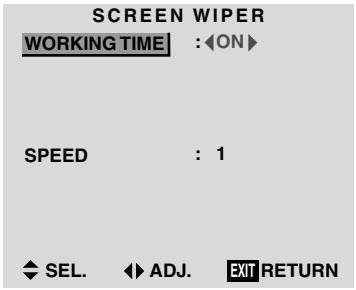
Example: Setting so that the SCREEN WIPER mode starts in 30 minutes and proceeds for one and a half hours.

Perform Steps 1-2 on Page 30, then:

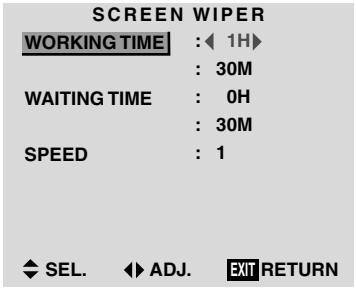
3. Use the ▲ and ▼ buttons to select “SCREEN WIPER”, then use the ◀ and ▶ buttons to select “ON”.



4. Press the PROCEED button.
   The “SCREEN WIPER” screen appears.



5. Adjust the time and speed using the ◀ and ▶ buttons and the ▲ and ▼ buttons.
   The mode switches as follows each time the ◀ and ▶ button is pressed.



The 1st line of the “WORKING TIME”:

→ ON or 0H ↔ 1H ↔ 2H ↔ 3H ↔ ... ↔ 12H ←

* The “WORKING TIME” (minutes) and “WAITING TIME” cannot be set when the “WORKING TIME” is “ON”.

The 2nd line of the “WORKING TIME”:

→ 0M ↔ 3M ↔ 6M ↔ 9M ↔ ... ↔ 57M←

The 1st line of the “WAITING TIME”:

→ 0H ↔1H ↔ 2H ↔ 3H ↔ ... ↔ 12H←

The 2nd line of the “WAITING TIME”:

→ 0M ↔ 3M ↔ 6M ↔ 9M ↔ ... ↔ 57M←

“SPEED”:

→ 1↔ 2 ↔ 3 ↔ 4 ↔ 5←

6. *Once the setting is completed...*
   Press the EXIT button several times to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Setting the time

WORKING TIME

Set the length of time the “SCREEN WIPER” mode lasts.
When the WORKING TIME is set to “ON”, the “SCREEN WIPER” mode stays in the state.

WAITING TIME

Set the length of time until the “SCREEN WIPER” mode starts.

SPEED

Set the moving speed for the “SCREEN WIPER”. The speed decreases as the number increases.

* The “WORKING TIME” and “WAITING TIME” can be set for up to 12 hours and 45 minutes in units of 3 minutes.

■ To select “ON” for “WORKING TIME”...

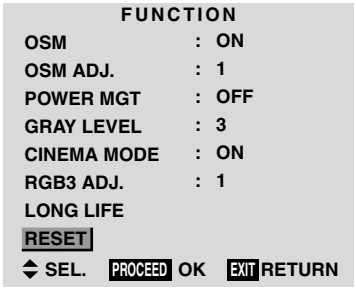
Set the hours of the “WORKING TIME” to 0H and the minutes to 0M. “ON” will be displayed.

Resetting to the default values

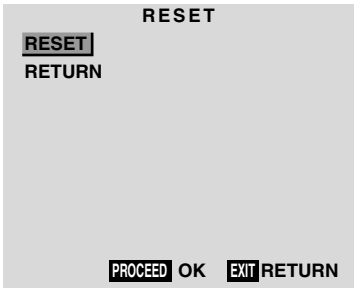
Use these operations to restore all the picture adjustments, audio settings, to the factory default values.
Refer to page 17 for items to be reset.

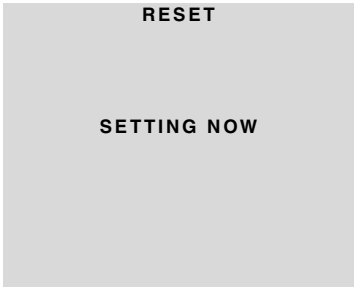
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “FUNCTION”, then press the PROCEED button.
   The “FUNCTION” screen appears.
2. Use the ▲ and ▼ buttons to select “RESET”, then press the PROCEED button.



   The “RESET” screen appears.
3. Use the ▲ and ▼ buttons to select “RESET”, then press the PROCEED button.





   When the “SETTING NOW” screen disappears, the screen will be restored to the previous “RESET” mode, then all the settings are restored to the default values.
4. *Once the setting is completed ...*
   Press the EXIT button.
   To delete the main menu, press the EXIT button once more.

Options Settings Menu

Setting the allocation of the audio connectors

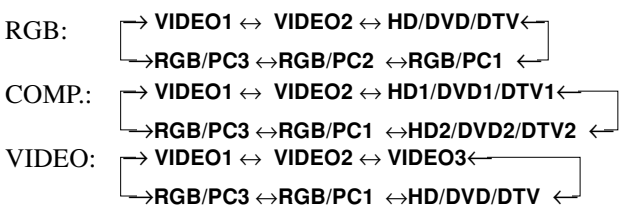
Setting the AUDIO 1, 2, and 3 connectors to the desired input.

Example: Setting “AUDIO 1” to “VIDEO 2”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “OPTIONS”, then press the PROCEED button.
   The “OPTIONS” screen appears.
2. Use the ▲ and ▼ buttons to select “AUDIO 1”.

3. *To set the AUDIO1 to “VIDEO2”...*
   Use the ◀ and ▶ buttons to select “VIDEO2”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   The available sources depend on the setting of “BNC SELECT”.



4. *Once the setting is completed...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ AUDIO INPUT

A single audio input cannot be selected as the audio channel for more than one input terminal.

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

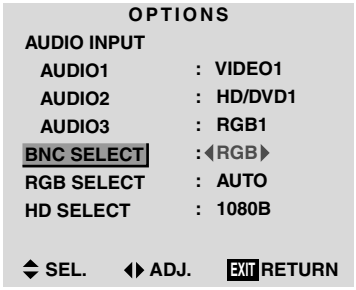
Setting the BNC connectors

Select whether to set the input of the 5 BNC connectors to RGB, component and video.

Example: Set the BNC SELECT mode to “COMP.”

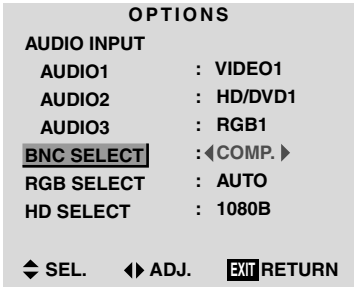
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “OPTIONS”, then press the PROCEED button.
   The “OPTIONS” screen appears.
2. Use the ▲ and ▼ buttons to select “BNC SELECT”.



3. *To set the BNC SELECT mode to “COMP.”...*
   Use the ◀ and ▶ buttons to select “COMP.”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   → RGB ↔ COMP. ↔ VIDEO ←



4. *Once the setting is completed...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ BNC SELECT

RGB ..... Use the 5BNC terminal for RGB input.
COMP. ..... Use the 3BNC terminal for component input.
VIDEO ..... Use the G/Y/VIDEO 3 terminal for video input.

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

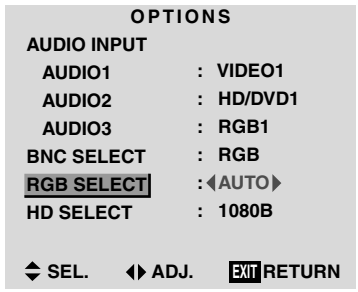
Setting a computer image to the correct RGB select screen

With the computer image, select the RGB Select mode for a moving image such as (video) mode, wide mode or digital broadcast.

Example: Setting the “RGB SELECT” mode to “MOTION ”

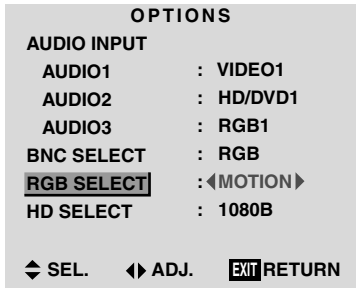
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “OPTIONS”, then press the PROCEED button.
   The “OPTIONS” screen appears.
2. Use the ▲ and ▼ buttons to select “RGB SELECT”.



3. *To set the RGB select mode to “MOTION” ...*
   Use the ◀ and ▶ buttons to select “MOTION”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   → AUTO ↔ STILL ↔ MOTION ↔ WIDE1 ↔ WIDE2 ↔ DTV ←



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ RGB SELECT modes

One of these 6 modes must be selected in order to display the following signals correctly.

AUTO ..... Select the suitable mode for the specifications of input signals as listed in the table "Computer input signals supported by this system" on page 52.

STILL ..... To display VESA standard signals. (Use this mode for a still image from a computer.)

MOTION ..... The video signal (from a scan converter) will be converted to RGB signals to make the picture more easily viewable. (Use this mode for a motion image from a computer.)

WIDE1 ..... When an 852 dot × 480 line signal with a horizontal frequency of 31.7kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE1.

WIDE2 ..... When an 848 dot × 480 line signal with a horizontal frequency of 31.0 kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE2.

DTV ..... Set this mode when watching digital broadcasting (480P).

See page 52 for the details of the above settings.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

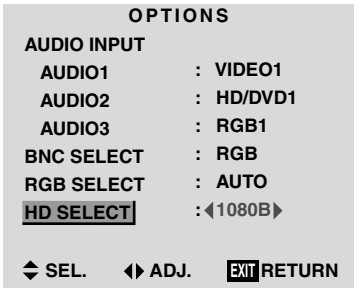
Setting high definition images to the suitable screen size

Use this procedure to set whether the number of vertical lines of the input high definition image is 1035 or 1080.

Example: Setting the "1080B" mode to "1035I"

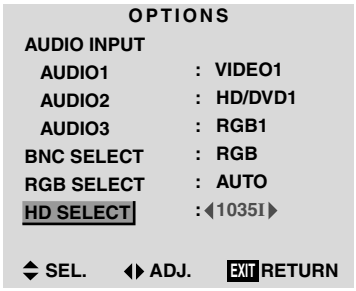
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "OPTIONS", then press the PROCEED button.
   The "OPTIONS" screen appears.
2. Use the ▲ and ▼ buttons to select "HD SELECT".



3. *To set the HD SELECT mode to "1035I" ...*
   Use the ◀ and ▶ buttons to select "1035I".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   →**1080B** ↔ **1035I** ↔ **1080A** ←



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ HD SELECT modes

These 3 modes are not displayed in correct image automatically.

1080B ..... Standard digital broadcasts

1035I ..... Japanese "High Vision" signal format

1080A ..... Special Digital broadcasts (for example : DTC100)

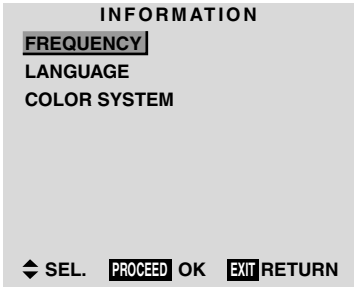
Information Menu

Checking the frequencies, polarities of input signals, and resolution

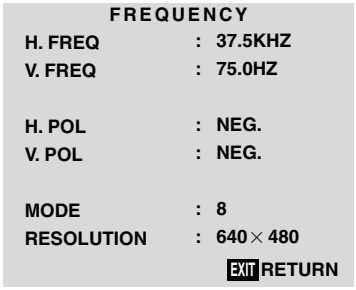
Use this function to check the frequencies and polarities of the signals currently being input from a computer, etc.

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “INFORMATION”, then press the PROCEED button.
   The “INFORMATION” screen appears.
2. Use the ▲ and ▼ buttons to select “FREQUENCY”, then press the PROCEED button.



3. The frequency is displayed.



   * Press the EXIT button to return to the previous screen.

4. *Once you have checked the frequency ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

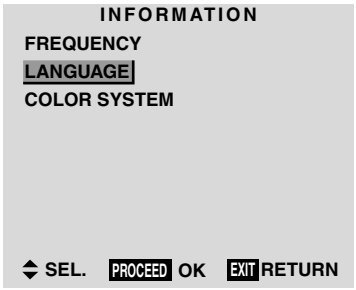
Setting the language for the menus

The menu display can be set to one of seven languages: Japanese, English, German, French, Swedish, Italian or Spanish.

Example: Setting the menu display to “DEUTSCH”

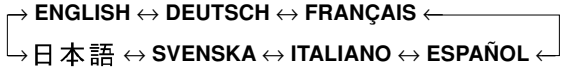
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “INFORMATION”, then press the PROCEED button. The “INFORMATION” screen appears.
2. Use the ▲ and ▼ buttons to select “LANGUAGE”, then press the PROCEED button.



   The “LANGUAGE” screen appears.

3. *To select “ DEUTSCH ” ...*
   Use the ◀ and ▶ buttons to select “ DEUTSCH ”.
   The mode switches as follows when the ◀ and ▶ buttons are pressed:



4. Press the PROCEED button.
   The display language is switched to Deutsch.
5. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Language settings

ENGLISH ..... English
DEUTSCH ..... German
FRANÇAIS ..... French
ESPAÑOL ..... Spanish
ITALIANO ..... Italian
SVENSKA ..... Swedish
日本語 ..... Japanese

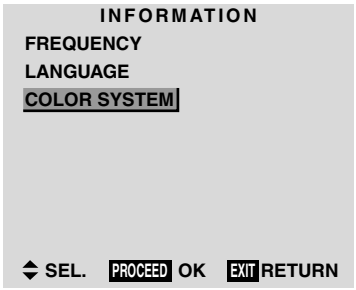
Setting the video signal format

Use these operations to set the video signal format.

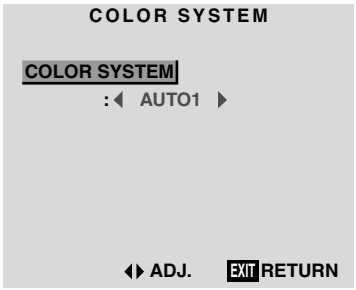
Example: Setting the video signal format to “3.58 NTSC”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “INFORMATION”, then press the PROCEED button.
   The “INFORMATION” screen appears.
2. Use the ▲ and ▼ buttons to select “COLOR SYSTEM”, then press the PROCEED button.

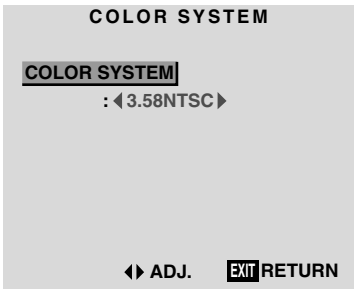


The “COLOR SYSTEM” screen appears.



3. *To select “3.58 NTSC” ...*
   Use the ◀ and ▶ buttons to select “3.58 NTSC”.
   The mode switches as follows when the ◀ and ▶ buttons are pressed:

   → **AUTO1** ↔ **AUTO2** ↔ **3.58NTSC** ↔ **4.43NTSC** ←
   ↳ **SECAM** ↔ **PAL-M** ↔ **PAL-N** ↔ **PAL60** ↔ **PAL** ↵



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu. To delete the main menu, press the EXIT button once more.

   The color system is set to “3.58 NTSC”.

Information

■ Video signal formats

Different countries use different formats for video signals. Set to the format used in your current country.

AUTO1/2 ..... The video signals are automatically detected and the format is set accordingly.
AUTO1: 3.58NTSC, 4.43NTSC, PAL, SECAM, PAL60
AUTO2: PAL-M, PAL-N, 3.58NTSC

PAL (B, G) ..... This is the standard format used mainly in the United Kingdom and Germany.

SECAM ..... This is the standard format used mainly in France and Russia.

4.43 NTSC, PAL60 ..... This format is used for videos in countries using PAL and SECAM video signals.

3.58 NTSC ..... This is the standard format used mainly in Japan and the United States.

PAL-M ..... This is the standard format used mainly in Brazil.

PAL-N ..... This is the standard format used mainly in Argentina.

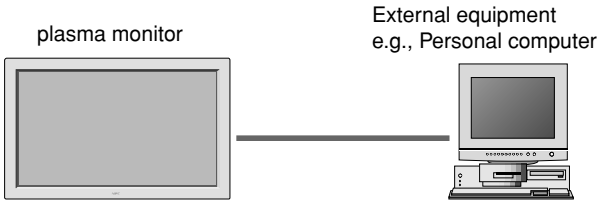
External Control

Application

These specifications cover the communications control of the plasma monitor by external equipment.

Connections

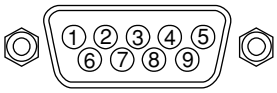
Connections are made as described below.



1) Connector on the plasma monitor side: EXTERNAL CONTROL connector.

Type of connector: D-Sub 9-pin male

No.	Pin Name
1	No Connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection



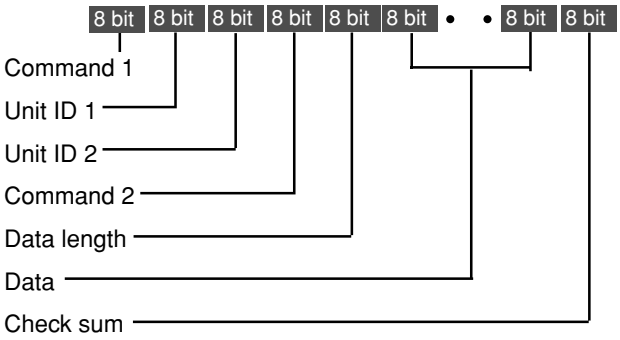
2) Connector on the external equipment side: Serial port (RS-232C) connector.
See the specifications of the equipment that is to be connected for the type of connector and the pin assignment.

3) Wiring
Use a crossed (reverse) cable.
Wire the cable so that each pair of data lines cross between the two devices. These data line pairs are RXD (Receive data) and TXD (Transmit data), DTR (DTE side ready) and DSR (DCE side ready), and RTS (Ready to send) and CTS (Clear to send).

Communication Parameters

(1) Communication system	Asynchronous
(2) Interface	RS-232C
(3) Baud rate	9600 bps
(4) Data length	8 bits
(5) Parity	Odd
(6) Stop bit	1 bit
(7) Communication code	Hex

Communication Format



Command 1

Command 1, along with command 2, is a number used to distinguish each command.
In the case of ACK, when the lower order 4 bits is FH (as in 3FH and 7FH), this indicates that the commands and data of the supported equipment have been received. When the lower order 4 bits is BH (as in 3BH and 7BH), this indicates that unsupported commands and data have been received.

Unit ID 1 and Unit ID 2

Unit ID 1 and unit ID 2 are numbers used to identify the equipment that is to be connected.
60H is used for the plasma monitor and 80H is used for external control equipment such as a personal computer.

1) Unit ID 1: Indicates the equipment sending the signal
2) Unit ID 2: Indicates the equipment receiving the signal

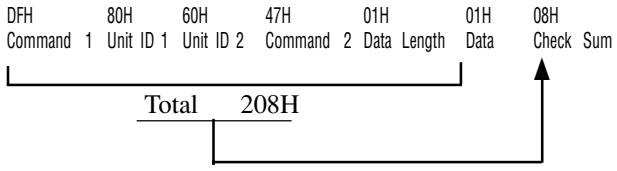
Command 2

Command 2, along with command 1, is a number used to distinguish each command.

Check Sum (CKS), Error Processing, and ACK

1) The check sum described below and RS-232C odd parity are used together for a check of the received data. The check sum is the lower order 8 bits of one frame of sent or received data comprising the sum total of Command 1, Unit ID 1 and 2, Command 2, Data Length, and Data.

Check Sum Example



2) Error Processing
- When the communication interval is vacant for more than 4 ms, thereafter a received Command 1 will be recognized. If, at this time, meaningful data cannot be recognized, that data will not be recognized (as valid data).
- An ACK will not be returned unless the receive data error, the check sum error, and the receive data are all taken in.

Command Reference List

	CMD1	CMD2	LEN
01. Power ON	9FH	4EH	00H
02. Power OFF	9FH	4FH	00H
03. Input Switch Change	DFH	47H	01H
04. VOLUME Gain Data	DFH	7FH	03H
05. AUDIO Mute On	9FH	3EH	00H
06. AUDIO Mute Off	9FH	3FH	00H
07. CONTRAST Gain Data	DFH	7FH	03H
08. BRIGHT Gain Data	DFH	7FH	03H
09. SHARPNESS Gain Data	DFH	7FH	03H
10. Color Gain Data	DFH	7FH	03H
11. TINT Gain Data	DFH	7FH	03H
12. PICTURE MODE Select	DFH	0AH	01H
13. COLOR TEMP SELECT	DFH	00H	01H
14. RED Gain Data	DFH	7FH	04H
15. GREEN Gain Data	DFH	7FH	04H
16. BLUE Gain Data	DFH	7FH	04H
17. NR MODE Set	DFH	C0H	01H
18. BASS Gain Data	DFH	7FH	03H
19. TREBLE Gain Data	DFH	7FH	03H
20. BALANCE Gain Data	DFH	7FH	03H
21. SCREEN MODE Select	DFH	51H	01H
22. V. POSITION Gain Data	DFH	7FH	03H
23. H. POSITION Gain Data	DFH	7FH	03H
24. V-HEIGHT Gain Data	DFH	7FH	03H
25. H-WIDTH Gain Data	DFH	7FH	03H
26. AUTO PICTURE Select	DFH	7FH	03H
27. PHASE Gain Data	DFH	7FH	03H
28. CLOCK Gain Data	DFH	7FH	03H
29. OSM Select	DFH	58H	01H
30. OSM ADJ. Gain Data	DFH	1AH	02H
31. POWER MGT Select	DFH	1AH	02H
32. GRAY LEVEL Set	DFH	C6H	01H
33. CINEMA MODE Set	DFH	C1H	01H
34. RGB3 ADJ. Select	DFH	1AH	02H
35. LONG LIFE Set	DFH	6BH	03H
36. INVERSE Set	DFH	C7H	03H
37. SCREEN WIPER Set	DFH	C8H	04H
38. RESET	1FH	54H	00H
39. Audio Select Set	DFH	70H	02H
40. BNC SELECT	DFH	8CH	01H
41. RGB Select	DFH	8BH	01H
42. HD Select	DFH	8AH	01H
43. LANGUAGE Select	DFH	5BH	01H
44. COLOR SYSTEM Select	DFH	5CH	01H
45. FREQUENCY Request	1FH	26H	00H
46. Input MODE Request	1FH	41H	00H
47. VIDEO ADJ Request	1FH	45H	00H
48. Audio Select Request	1FH	6FH	00H
49. Failure Mode Request	1FH	3FH	00H
50. MODEL NAME Request	1FH	17H	00H

01. Power ON

Function

The external control equipment switches on the power of the plasma monitor.

Transmission Data

9FH	80H	60H	4EH	00H	CKS

ACK

The plasma monitor returns the following ACK when the power is switched on.

3FH	60H	80H	4EH	00H	CKS

NOTE: Do not set the Power ON or Power OFF command continuously.

02. Power OFF

Function

The external control equipment switches off the power of the plasma monitor.

Transmission Data

9FH	80H	60H	4FH	00H	CKS

ACK

The plasma monitor returns the following ACK when the power is switched off.

3FH	60H	80H	4FH	00H	CKS

NOTE: Do not set the Power ON or Power OFF command continuously.

03. Input Switch Change

Function

The external control equipment switches the input of the plasma monitor.

Transmission Data

DFH	80H	60H	47H	01H	DATA00	CKS

DATA00: Input Select

- 01H: Video1
- 02H: Video2
- 03H: Video3
- 05H: HD (HD1 or DTV or DTV1)
- 06H: HD2 (DTV2)
- 07H: RGB1/PC1
- 08H: RGB2/PC2
- 0CH: RGB3/PC3

ACK

The plasma monitor returns the following ACK when the input is switched.

3FH	60H	80H	47H	00H	CKS

04. VOLUME Gain Data

Function

The external control equipment changes the VOLUME gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER SOUND Gain Flag 05H

DATA01: VOLUME Gain Flag 01H

DATA02: VOLUME Gain 00H: Step 0
|
0AH: Step 10 (Default)
|
2AH: Step 42

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER SOUND Gain Flag 05H

DATA01: VOLUME Gain Flag 01H

05. AUDIO Mute On

Function

The external control equipment switches on AUDIO Mute of the plasma monitor.

Transmission Data

9FH	80H	60H	3EH	00H	CKS

ACK

3FH	60H	80H	3EH	00H	CKS

06. AUDIO Mute Off

Function

The external control equipment switches off AUDIO Mute of the plasma monitor.

Transmission Data

9FH	80H	60H	3FH	00H	CKS

ACK

3FH	60H	80H	3FH	00H	CKS

07. CONTRAST Gain Data

Function

The external control equipment changes the CONTRAST gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: CONTRAST Gain Flag 07H

DATA02: CONTRAST Gain CCH : -52
|
FFH: -01
00H: 0
01H: +01
|
14H: +20

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: CONTRAST Gain Flag 07H

08. BRIGHT Gain Data

Function

The external control equipment changes the BRIGHT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: BRIGHT Gain Flag 08H

DATA02: BRIGHT Gain E0H: -32
|
FFH: -01
00H: 0
01H: +01
|
20H: +32

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: BRIGHT Gain Flag 08H

09. SHARPNESS Gain Data

Function

The external control equipment changes the SHARPNESS gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: SHARPNESS Gain Flag 06H

DATA02: SHARPNESS Gain F0H: -16
|
FFH: -01
00H: 0
01H: +01
|
10H:+16

Only when a RGB signal is connected

DATA02: SHARPNESS Gain 01H: 1
02H: 2
03H: 3
04H: 4

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: SHARPNESS Gain Flag 06H

10. COLOR Gain Data

Function

The external control equipment changes the COLOR gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: COLOR Gain Flag 04H
DATA02: COLOR Gain E0H: -32
* COLOR Gain is from -22 (EAH) to +22 (16H) only during video.
FFH: -01
00H: 0
01H: +01
20H: +32

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: COLOR Gain Flag 04H

11.TINT Gain Data

Function

The external control equipment changes the TINT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: TINT Gain Flag 05H
DATA02: TINT Gain E0H: -32
* TINT Gain is from -22 (EAH) to +22 (16H) only during video.
FFH: -01
00H: 0
01H: +01
20H: +32

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: TINT Gain Flag 05H

12. PICTURE MODE Select

Function

The external control equipment sets the picture mode of the plasma monitor.

Transmission Data

DFH	80H	60H	0AH	01H	DATA00	CKS

DATA00: 01H: MEMORY
02H: THEATER
03H: NORMAL
04H: RESET

ACK

7FH	60H	80H	0AH	01H	DATA00	CKS

DATA00: 01H: MEMORY
02H: THEATER
03H: NORMAL
04H: RESET

13. COLOR TEMP SELECT

Function

The external control equipment changes the COLOR TEMP of the plasma monitor.

Transmission Data

DFH	80H	60H	00H	01H	DATA00	CKS

DATA00: 00H: 1
01H: 2
02H: 3
03H: PRO

ACK

7FH	60H	80H	00H	01H	DATA00	CKS

DATA00: 00H: 1
01H: 2
02H: 3
03H: PRO

NOTE: Set so that at the selection of 1, 2, or 3 of COLOR TEMP change of the following R/G/B GAIN data cannot be accepted.

14. RED Gain Data

Function

The external control equipment changes the RED Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: RED Gain Flag 01H
DATA02: RED Gain 1 (Bias) D8H: -40
FFH: -1
00H: 0
IEH: +30
DATA03: RED Gain 2 (Drive) D8H: -40
FFH: -1
00H: 0
IEH: +30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: RED Gain Flag 01H

15. GREEN Gain Data

Function

The external control equipment changes the GREEN Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00: USER PICTURE Gain Flag — 01H
DATA01: GREEN Gain Flag — 02H
DATA02: GREEN Gain 1 (Bias) — D8H: -40 | FFH: -1 | 00H: 0 | IEH: +30
DATA03: GREEN Gain2 (Drive) — D8H: -40 | FFH: -1 | 00H: 0 | IEH: +30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag — 01H
DATA01: GREEN Gain Flag — 02H

16. BLUE Gain Data

Function

The external control equipment changes the BLUE Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00: USER PICTURE Gain Flag — 01H
DATA01: BLUE Gain Flag — 03H
DATA02: BLUE Gain1(Bias) — D8H:-40 | FFH:-1 | 00H: 0 | IEH: +30
DATA03: BLUE Gain2(Drive) — D8H: -40 | FFH:-1 | 00H: 0 | IEH:+30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag — 01H
DATA01: BLUE Gain Flag — 03H

17. NR MODE Set

Function

The external control equipment sets the NR (Noise Reduction) mode of the plasma monitor.

Transmission Data

DFH	80H	60H	C0H	01H	DATA00	CKS

DATA00: 01H: NR OFF
02H: NR-1
03H: NR-2
04H: NR-3

ACK

7FH	60H	80H	C0H	01H	DATA00	CKS

DATA00: 01H: NR OFF
02H: NR-1
03H: NR-2
04H: NR-3

18. BASS Gain Data

Function

The external control equipment changes the BASS gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag — 05H
DATA01: BASS Gain Flag — 03H
DATA02: BASS Gain — F3H: -13 | FFH: -01 | 00H: 0 | 01H: +01 | 0DH: +13

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag — 05H
DATA01: BASS Gain Flag — 03H

19. TREBLE Gain Data

Function

The external control equipment changes the TREBLE gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag — 05H
DATA01: TREBLE Gain Flag — 04H
DATA02: TREBLE Gain — F3H: -13 | FFH: -01 | 00H: 0 | 01H: +01 | 0DH: +13

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag — 05H
DATA01: TREBLE Gain Flag — 04H

20. BALANCE Gain Data

Function

The external control equipment changes the BALANCE gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 05H
DATA01: BALANCE Gain Flag 02H
DATA02: BALANCE Gain EAH: -22
FFH: -01
00H: 0
01H: +01
16H: +22

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 05H
DATA01: BALANCE Gain Flag 02H

21. SCREEN MODE Select

Function

The external control equipment switches the screen mode of the plasma monitor.

Transmission Data

DFH	80H	60H	51H	01H	DATA00	CKS

DATA00: 02H: STADIUM
03H: ZOOM
04H: NORMAL
05H: FULL

ACK

7FH	60H	80H	51H	01H	DATA00	CKS

DATA00: 02H: STADIUM
03H: ZOOM
04H: NORMAL
05H: FULL

22. V. POSITION Gain Data

Function

The external control equipment changes the V. POSITION gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: V. POSITION Gain Flag 01H
DATA02: V. POSITION Gain C0H: -64
FFH: -01
00H: 0
01H: +01
40H: +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: V. POSITION Gain Flag 01H

23. H. POSITION Gain Data

Function

The external control equipment changes the H. POSITION gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: H. POSITION Gain Flag 02H
DATA02: H. POSITION Gain 80H: -128
FFH: -01
00H: 0
01H: +01
7FH: +127

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: H. POSITION Gain Flag 02H

24. V-HEIGHT Gain Data

Function

The external control equipment changes the V-HEIGHT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: V-HEIGHT Gain Flag 07H
DATA02: V-HEIGHT Gain 00H: 0
40H: +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: V-HEIGHT Gain Flag 07H

25. H-WIDTH Gain Data

Function

The external control equipment changes the H-WIDTH gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: H-WIDTH Gain Flag 08H
DATA02: H-WIDTH Gain 00H: 0
40H: +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: H-WIDTH Gain Flag 08H

26. AUTO PICTURE Select

Function

The external control equipment switches on or off the AUTO PICTURE of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: AUTO PICTURE Select Flag 09H
DATA02: 00H: ON
01H: OFF

ACK

7FH	60H	80H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: AUTO PICTURE Select Flag 09H
DATA02: 00H: ON
01H: OFF

27. PHASE Gain Data

Function

The external control equipment changes the PHASE gain data (Phase) of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: PHASE Gain Flag 03H
DATA02: PHASE Gain 00H: 0
|
2CH: +44

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: PHASE Gain Flag 03H

28. CLOCK Gain Data

Function

The external control equipment changes the CLOCK gain data (ratio of frequency division) of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: CLOCK Gain Flag 04H
DATA02: CLOCK Gain C0H: -64
|
FFH: -01
00H: 0
01H: +01
|
40H: +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: CLOCK Gain Flag 04H

29. OSM Select

Function

The external control equipment switches on or off the on-screen menu (OSM) of the plasma monitor.

Transmission Data

DFH	80H	60H	58H	01H	DATA00	CKS

DATA00: 01H: On-Screen menu On
02H: On-Screen menu Off

ACK

7FH	60H	80H	58H	01H	DATA00	CKS

DATA00: 01H: On-Screen menu On
02H: On-Screen menu Off

On-Screen menu On/Off is equivalent to the OSM menu item under the FUNCTION menu.

*Operation is as described in the table below.

Operation	On-Screen Menu (OSM)			
	Display of items and adjustments on the menu		Volume display, input display, and screen size display	
	When screen menu is ON	When screen menu is OFF	When screen menu is ON	When screen menu is OFF
Remote control operation	Yes	Yes	Yes	No
Personal computer control operation	No	No	Yes	No

30. OSM ADJ. Gain Data

Function

The external control equipment sets the position of the OSM menu of the plasma monitor.

Transmission Data

DFH	80H	60H	1AH	02H	DATA00	DATA01	CKS

DATA00: OSM ADJ. Gain Flag 02H
DATA01: 01H: 1
|
06H: 6

ACK

7FH	60H	80H	1AH	01H	DATA00	CKS

DATA00: OSM ADJ. Gain Flag 02H

31. POWER MGT Select

Function

The external control equipment switches on or off the POWER MANAGEMENT of the plasma monitor.

Transmission Data

DFH	80H	60H	1AH	02H	DATA00	DATA01	CKS

DATA00: POWER MGT Select 03H
DATA01: 01H: ON
02H: OFF

ACK

7FH	60H	80H	1AH	02H	DATA00	DATA01	CKS

DATA00: POWER MGT Select 03H
DATA01: 01H: ON
02H: OFF

32. GRAY LEVEL Set

Function

The external control equipment sets the GRAY LEVEL of the plasma monitor.

Transmission Data

DFH	80H	60H	C6H	01H	DATA00	CKS

DATA00: GRAY LEVEL 00H: 0
|
0FH: 15

ACK

7FH	60H	80H	C6H	01H	DATA00	CKS

DATA00: GRAY LEVEL 00H: 0
|
0FH: 15

33. CINEMA MODE Set

Function

The external control equipment switches on or off the CINEMA MODE of the plasma monitor.

Transmission Data

DFH	80H	60H	C1H	01H	DATA00	CKS

DATA00: CINEMA MODE Set 01H: ON
02H: OFF

ACK

7FH	60H	80H	C1H	01H	DATA00	CKS

DATA00: CINEMA MODE Set 01H: ON
02H: OFF

34. RGB3 ADJ. Select

Function

The external control equipment sets the RGB3 ADJUST of the plasma monitor.

Transmission Data

DFH	80H	60H	1AH	02H	DATA00	DATA01	CKS

DATA00: RGB3 ADJ. Select 06H
DATA01: 01H: 1
02H: 2
03H: 3

ACK

7FH	60H	80H	1AH	02H	DATA00	DATA01	CKS

DATA00: RGB3 ADJ. Select 06H
DATA01: 01H: 1
02H: 2
03H: 3

35. LONG LIFE Set

Function

The external control equipment sets the PLE, ORBITER, and INVERSE (inverse of image brightness) of the plasma monitor.

Transmission Data

DFH	80H	60H	6BH	03H	DATA00	DATA01	DATA02	CKS

DATA00: PLE 01H: AUTO
02H: LOCK
DATA01: INVERSE 01H: ON
02H: OFF
03H: WHITE
DATA02: ORBITER (PICTURE SHIFT) 01H: ON
02H: OFF

ACK

The plasma monitor returns the following ACK when setting the PLE, ORBITER, and INVERSE (inverse of image brightness):

3FH	60H	80H	6BH	00H	CKS

36. INVERSE Set

Function

The external control equipment sets the INVERSE (inverse of image brightness) and the WHITE of the plasma monitor.

Transmission Data

DFH	80H	60H	C7H	03H	DATA00	DATA01	DATA02	CKS

DATA00 : INVERSE/WHITE
- 00H: No operation
- 01H: ON(INVERSE)
- 02H: OFF
- 03H: WHITE

DATA01 : WORKING TIME
- 00H: ON
- 01H: 03M (minutes)
- 02H: 06M (minutes)
- |
- FFH: 12H (hours) and 45M (minutes)

DATA02 : WAITING TIME
- 01H: 03M (minutes)
- 02H: 06M (minutes)
- |
- FFH: 12H (hours) and 45M (minutes)

ACK

3FH	60H	80H	C7H	00H	CKS

NOTE: The WORKING TIME and the WAITING TIME can be set in units of 3 minutes.
Example: 03H=9 minutes
1EH=1 hour and 30 minutes

37. SCREEN WIPER Set

Function

The external control equipment sets the SCREEN WIPER of the plasma monitor.

Transmission Data

DFH	80H	60H	C8H	04H	DATA00 to	DATA03	CKS

DATA00 : SCREEN WIPER
- 00H: No operation
- 01H: ON
- 02H: OFF

DATA01 : WORKING TIME
- 00H: ON
- 01H: 03M (minutes)
- 02H: 06M (minutes)
- |
- FFH: 12H (hours) and 45M (minutes)

DATA02 : WAITING TIME
- 01H: 03M (minutes)
- 02H: 06M (minutes)
- |
- FFH: 12H (hours) and 45M (minutes)

DATA03 : SPEED
- 01H: 1
- |
- 05H: 5

ACK

3FH	60H	80H	C8H	00H	CKS

NOTE: The WORKING TIME and the WAITING TIME can be set in units of 3 minutes.
Example: 03H=9 minutes
1EH=1 hour and 30 minutes

38. RESET

Function

The external control equipment resets the user adjustment of the plasma monitor.

Transmission Data

1FH	80H	60H	54H	00H	CKS

ACK

3FH	60H	80H	54H	00H	CKS

39. Audio Select Set

Function

The external control equipment sets combinations of audio and video inputs for the plasma monitor.

Transmission Data

DFH	80H	60H	70H	02H	DATA00	DATA01	CKS

DATA00: AUDIO INPUT
- 01H: AUDIO 1
- 02H: AUDIO 2
- 03H: AUDIO 3

DATA01: VISUAL INPUT
- 01H: Video 1
- 02H: Video 2
- 03H: Video 3
- 05H:HD (HD1 or DTV or DTV1)
- 06H: HD2 (DTV2)
- 07H: RGB 1/ PC 1
- 08H: RGB 2/ PC 2
- 0CH: RGB 3/ PC 3

ACK

The plasma monitor returns the following ACK when the input is switched.

3FH	60H	80H	70H	00H	CKS

* The plasma monitor returns “Not Available” when selecting the video input same as the one set at one of the AUDIO 1 to 3.

Example:

The plasma monitor returns “Not Available” when selecting the VIDEO1 for AUDIO2 or VIDEO3 after VIDEO1 has been set to AUDIO1.

40. BNC SELECT

Function

The external control equipment sets the BNC SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8CH	01H	DATA00	CKS

DATA00 : BNC SELECT
- 01H: RGB
- 02H: Component
- 03H: Video

ACK

The plasma monitor returns the following ACK when setting the BNC SELECT:

7FH	60H	80H	8CH	01H	DATA00	CKS

DATA00 : BNC SELECT
- 01H: RGB
- 02H: Component
- 03H: Video

41. RGB Select

Function

The external control equipment sets the RGB SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8BH	01H	DATA00	CKS

DATA00:
- 01H: AUTO
- 02H: STILL
- 03H: MOTION
- 04H: WIDE1
- 05H: WIDE2
- 06H: DTV

ACK

7FH	60H	80H	8BH	01H	DATA00	CKS

DATA00:
- 01H: AUTO
- 02H: STILL
- 03H: MOTION
- 04H: WIDE1
- 05H: WIDE2
- 06H: DTV

42. HD Select

Function

The external control equipment sets the HD SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8AH	01H	DATA00	CKS

DATA00:
- 01H: 1035I
- 02H: 1080A
- 03H: 1080B

ACK

7FH	60H	80H	8AH	01H	DATA00	CKS

DATA00:
- 01H: 1035I
- 02H: 1080A
- 03H: 1080B

43. LANGUAGE Select

Function

The external control equipment sets the LANGUAGE SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	5BH	01H	DATA00	CKS

DATA00:
- 01H: ENGLISH
- 02H: GERMAN
- 03H: FRENCH
- 04H: SPANISH
- 05H: ITALIAN
- 06H: SWEDISH
- 07H: JAPANESE

ACK

7FH	60H	80H	5BH	01H	DATA00	CKS

DATA00:
- 01H: ENGLISH
- 02H: GERMAN
- 03H: FRENCH
- 04H: SPANISH
- 05H: ITALIAN
- 06H: SWEDISH
- 07H: JAPANESE

44. COLOR SYSTEM Select

Function

The external control equipment sets the COLOR SYSTEM of the plasma monitor.

Transmission Data

DFH	80H	60H	5CH	01H	DATA00	CKS

DATA00:
- 01H: 3.58NTSC
- 02H: 4.43NTSC
- 03H: PAL
- 04H: SECAM
- 0AH: AUTO1
- 0BH: PAL60
- 0CH: AUTO2
- 0DH: PAL- M
- 0EH: PAL- N

ACK

7FH	60H	80H	5CH	01H	DATA00	CKS

DATA00:
- 01H: 3.58NTSC
- 02H: 4.43NTSC
- 03H: PAL
- 04H: SECAM
- 0AH: AUTO1
- 0BH: PAL60
- 0CH: AUTO2
- 0DH: PAL- M
- 0EH: PAL- N

45. FREQUENCY Request

Function

The external control equipment inquires the Horizontal frequency, Vertical frequency, Horizontal sync polarity, Vertical sync polarity, Mode, and Resolution of the plasma monitor.

Transmission Data

1FH	80H	60H	26H	00H	CKS

ACK

7FH	60H	80H	26H	0BH	DATA00 to	DATA10	CKS

Horizontal frequency

DATA00: Integer part
- 00H: 0 (No signal: 00H)
- FFH: 256

DATA01: One decimal place
- 00H: 0 (No signal: 00H)
- 09H: 9

Vertical frequency

DATA02: Integer part
- 00H: 0 (No signal: 00H)
- FFH: 256

DATA03: One decimal place
- 00H: 0 (No signal: 00H)
- 09H: 9

Horizontal sync polarity

DATA04:
- 00H: –
- 01H: Positive
- 02H: Negative

Vertical sync polarity

DATA05:
- 00H: –
- 01H: Positive
- 02H: Negative

MODE

DATA06:

00H:	No signal	–
01H to 80H:	RGB signal	Identification number of PC mode
81H:	Video signal	3.58NTSC
82H:		4.43NTSC
83H:		PAL
84H:		PAL- M
85H:		PAL- N
86H:		PAL60
87H:		SECAM
88H:		B/W60
89H:		B/W50
A0H:	HD/DVD/DTV signal	480I
A1H:		480P
A2H:		576I
A3H:		576P
A4H:		720P
A5H:		1035I
A6H:		1080I

RESOLUTION

DATA07: Dots (Low-order byte)
- 00H: 0 (No signal: 00H)
- FFH: 256

DATA08: Dots (High-order byte)
- 00H: 257 (No signal: 00H)
- FFH

DATA09: Lines (Low-order byte)
- 00H: 0 (No signal: 00H)
- FFH: 256

DATA10: Lines (High-order byte)
- 00H: 257 (No signal: 00H)
- FFH

46. Input MODE Request

Function

The display returns the current input information by the external control equipment' s request.

Transmission Data

1FH	80H	60H	41H	00H	CKS

ACK

7FH	60H	80H	41H	01H	DATA00	CKS

DATA00: Input Select

01H: Video1	02H: Video2
03H: Video3	04H: HD (HD1 or DTV or DTV1)
05H: RGB1/PC1	06H: RGB2/PC2
0AH: DVD (DVD1)	0CH: HD2 (DTV2)
0DH: DVD2	0EH: RGB3/PC3

47. VIDEO ADJ Request

Function

The display returns the video adjustments information by the external control equipment's request.

Transmission Data

1FH	80H	60H	45H	00H	CKS

ACK

7FH	60H	80H	45H	0CH	DATA00 to DATA11	CKS

DATA00: RED Gain(Bias)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA01: GREEN Gain(Bias)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA02: BLUE Gain(Bias)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA03: COLOR Gain

E0H: -32
|
FFH: -01
00H: 0
01H: +01
|
20H: +32

* COLOR Gain is from -22 (EAH) to +22 (16H) only during video.

DATA04: TINT Gain

E0H: -32
|
FFH: -01
00H: 0
01H: +01
|
20H: +32

* TINT Gain is from -22 (EAH) to +22 (16H) only during video.

DATA05: SHARPNESS Gain

F0H: -16
|
FFH: -01
00H: 0
01H: +01
|
10H: +16

DATA06: CONTRAST Gain

CCH: -52
|
FFH: -01
00H: 0
01H: +01
|
14H: +20

DATA07: BRIGHT Gain

E0H: -32
|
FFH: -01
00H: 0
01H: +01
|
20H: +32

DATA08: RED Gain(Drive)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA09: GREEN Gain(Drive)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA10: BLUE Gain(Drive)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA11: COLOR TEMP

00H: 1
01H: 2
02H: 3
03H: PRO

48. Audio Select Request

Function

The external control equipment inquires the current combinations of audio and video inputs for the plasma monitor.

Transmission Data

1FH	80H	60H	6FH	00H	CKS

ACK

The plasma monitor returns the following ACK:

7FH	60H	80H	6FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: AUDIO 1
01H – 0CH: VISUAL INPUT DATA
DATA01: AUDIO 2
01H – 0CH: VISUAL INPUT DATA
DATA02: AUDIO 3
01H – 0CH: VISUAL INPUT DATA

VISUAL INPUT DATA
01H: Video 1
02H: Video 2
03H: Video 3
05H: HD (HD1 or DTV or DTV 1)
06H: HD2 (DTV2)
07H: RGB 1 /PC 1
08H: RGB 2 /PC 2
0CH: RGB 3 /PC 3

49. Failure Mode Request

Function

The external control equipment inquires the detection of failures of the plasma monitor.

Transmission Data

1FH	80H	60H	3FH	00H	CKS

ACK

The plasma monitor returns the following ACK:

7FH	60H	80H	3FH	02H	DATA00	DATA01	CKS

DATA00: FAILURE MODE 1
Bit 0 : PDP MODULE
0: Abnormal
1: Normal
Bit 1 : 1: fixed (backup)
Bit 2 : TEMPERATURE
0: Abnormal
1: Normal
Bit 3 : 1: fixed (backup)
Bit 4 : TEMPERATURE SENSOR
0: Abnormal
1: Normal
Bit 5 : 1: fixed (backup)
Bit 6 : 1: fixed (backup)
Bit 7 : 1: fixed (backup)
DATA01: FAILURE MODE 2
Bit 0–7 : 1: fixed (backup)

50. MODEL NAME Request

Function

The external control equipment inquires the product code of the plasma monitor.

Transmission Data

1FH	80H	60H	17H	00H	CKS

ACK

The plasma monitor returns the following ACK:

7FH	60H	80H	17H	0CH	DATA00 to	DATA11	CKS

DATA00 : 1st character of the product code
DATA01 : 2nd character of the product code
|
DATA11 : 12th character of the product code

NOTE:

Received data (Hex)	Corresponding character
00H	0
01H	1
|	|
08H	8
09H	9
10H	A
11H	B
12H	C
|	|
28H	Y
29H	Z
80H	- (Hyphen)
96H	(Blank)

If there are fewer than 12 characters in the product code, product code would be padded right with blanks.

Example: If the product code of your plasma monitor is “PX-42VM3A”, the returned codes would be as follows.

DATA00: 1FH
DATA01: 27H
DATA02: 80H
DATA03: 04H
DATA04: 02H
DATA05: 25H
DATA06: 1CH
DATA07: 03H
DATA08: 16H
DATA09: 96H
DATA10: 96H
DATA11: 96H

Table of Signals Supported

Supported resolution

- When the screen mode is NORMAL, each signal is converted to a 640 dots × 480 lines signal. (Except for *2, *4)
- When the screen mode is FULL, each signal is converted to a 853 dots × 480 lines signal. (Except for *3)

Computer input signals supported by this system

Model / Signal Type	Dots × lines	Vertical frequency (Hz)	Horizontal frequency (kHz)	Sync Polarity		Presence		Screen mode		RGB select*5	DVI
				Horizontal	Vertical	Horizontal	Vertical	NORMAL (4:3)	FULL (16:9)		
	640×400	70.1	31.5	NEG	NEG	YES	YES	YES*2*3	YES	– –	NO
*IBM PC/AT compatible computers	640×480	59.9	31.5	NEG	NEG	YES	YES	YES*3	YES	STILL	YES
		72.8	37.9	NEG	NEG	YES	YES	YES*3	YES	– –	YES
		75.0	37.5	NEG	NEG	YES	YES	YES*3	YES	STILL	YES
		85.0	43.3	NEG	NEG	YES	YES	YES*3	YES	– –	YES
		100.4	51.1	NEG	NEG	YES	YES	YES*3	YES	– –	YES
		120.4	61.3	NEG	NEG	YES	YES	YES*3	YES	– –	YES
	848×480	60.0	31.0	POS	POS	YES	YES	– –	YES*3	WIDE2	YES
	852×480*1	60.0	31.7	NEG	NEG	YES	YES	– –	YES*3	WIDE1	YES
	800×600	56.3	35.2	POS	POS	YES	YES	YES	YES	STILL	YES
		60.3	37.9	POS	POS	YES	YES	YES	YES	STILL	YES
		72.2	48.1	POS	POS	YES	YES	YES	YES	– –	YES
		75.0	46.9	POS	POS	YES	YES	YES	YES	– –	YES
		85.1	53.7	POS	POS	YES	YES	YES	YES	– –	YES
		99.8	63.0	POS	POS	YES	YES	YES	YES	– –	YES
		120.0	75.7	POS	POS	YES	YES	YES	YES	– –	YES
	1024×768	60.0	48.4	NEG	NEG	YES	YES	YES	YES	STILL	YES
		70.1	56.5	NEG	NEG	YES	YES	YES	YES	– –	YES
		75.0	60.0	POS	POS	YES	YES	YES	YES	STILL	YES
		85.0	68.7	POS	POS	YES	YES	YES	YES	– –	YES
		100.6	80.5	NEG	NEG	YES	YES	YES	YES	– –	NO
	1152×864	75.0	67.5	POS	POS	YES	YES	YES	YES	STILL	YES
	1280×768	56.2	45.1	POS	POS	YES	YES	– –	YES	WIDE1	NO
	1360×765	60.0	47.7	POS	POS	YES	YES	– –	YES	WIDE1	NO
	1360×768	60.0	47.7	POS	POS	YES	YES	– –	YES	WIDE1	NO
	1376×768	59.9	48.3	NEG	POS	YES	YES	– –	YES	WIDE2	YES
	1280×1024	60.0	64.0	POS	POS	YES	YES	YES*4	YES	– –	YES
		75.0	80.0	POS	POS	YES	YES	YES*4	YES	– –	NO
		85.0	91.1	POS	POS	YES	YES	YES*4	YES	– –	NO
	1600×1200	60.0	75.0	POS	POS	YES	YES	YES	YES	– –	NO
		65.0	81.3	POS	POS	YES	YES	YES	YES	– –	NO
		70.0	87.5	POS	POS	YES	YES	YES	YES	– –	NO
		75.0	93.8	POS	POS	YES	YES	YES	YES	– –	NO
*Apple Macintosh*6	640×480	66.7	35.0	Sync on G	Sync on G	– –	– –	YES*3	YES	– –	NO
	832×624	74.6	49.7	Sync on G	Sync on G	– –	– –	YES	YES	– –	NO
	1024×768	74.9	60.2	Sync on G	Sync on G	– –	– –	YES	YES	WIDE1	NO
	1152×870	75.1	68.7	Sync on G	Sync on G	– –	– –	YES	YES	WIDE1	NO
Work Station (EWS4800)	1280×1024	60.0	64.6	NEG	NEG	YES	YES	YES*4	YES	– –	YES
		71.2	75.1	NEG	NEG	YES	YES	YES*4	YES	– –	NO
Work Station (HP)	1280×1024	72.0	78.1	– –	– –	– –	– –	YES*4	YES	– –	NO
Work Station (SUN)	1152×900	66.0	61.8	C Sync	C Sync	– –	– –	YES	YES	– –	NO
		76.0	71.7	C Sync	C Sync	– –	– –	YES	YES	– –	NO
	1280×1024	76.1	81.1	C Sync	C Sync	– –	– –	YES*4	YES	– –	NO
Work Station (SGI)	1024×768	60.0	49.7	– –	– –	– –	– –	YES	YES	– –	YES
	1280×1024	60.0	63.9	– –	– –	– –	– –	YES*4	YES	– –	YES
IDC-3000G											
PAL625P	768×576	50.0	31.4	NEG	NEG	YES	YES	YES*7	YES*7	– –	NO
NTSC525P	640×480	59.9	31.5	NEG	NEG	YES	YES	YES*7	YES*7	MOTION	NO

*1 Only when using a graphic accelerator board that is capable of displaying 852×480.
*2 Display only 400 lines with the screen center of the vertical orientation located at the center.
*3 The picture is displayed in the original resolution.
The picture will be compressed for other signals.
*4 Aspect ratio is 5:4. This signal is converted to a 600 dots×480 lines signal.
*5 Normally the RGB select mode suite for the input signals is set automatically. If the picture is not displayed properly, set the RGB mode prepared for the input signals listed in the table above.
*6 To connect the monitor to Macintosh computer, use the monitor adapter (D-Sub 15-pin) to your computer's video port. If your computer has a mini D-Sub 15-pin connector, you may have to use the supplied RGB cable.
*7 Other screen modes (ZOOM and STADIUM) are available as well.

NOTE:

- *While the input signals comply with the resolution listed in the table above, you may have to adjust the position and size of the picture or the fine picture because of errors in synchronization of your computer.*
- *This monitor has a resolution of 853 dots × 480 lines. It is recommended that the input signal should be VGA, wide VGA, or equivalent.*
- *With digital input some signals are not accepted.*
- *The sync may be disturbed when a nonstandard signal other than the aforementioned is input.*
- *If you are connecting a composite sync signal, use the HD terminal.*

* "IBM PC/AT" and "VGA" are registered trademarks of International Business Machines, Inc. of the United States.
* "Apple Macintosh" is a registered trademark of Apple Computer, Inc. of the United States.

Troubleshooting

If the picture quality is poor or there is some other problem, check the adjustments, operations, etc., before requesting service.

Symptom	Checks	Remedy
Picture is disturbed. Sound is noisy. Remote control operates erroneously.	• Is a connected component set directly in front or at the side of the display?	• Leave some space between the display and the connected components.
The remote control does not work.	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
Monitor's power does not turn on when the remote control's power button is pressed.	• Is the monitor's power cord plugged into a power outlet?	• Plug the monitor's power cord into a power outlet.
	• Are all the monitor's indicators off?	• Press the power button on the monitor to turn on the power.
	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
Monitor does not operate when the remote control's buttons are pressed.	• Is the remote control pointed at the monitor, or is there an obstacle between the remote control and the monitor?	• Point the remote control at the monitor's remote control sensor when pressing buttons, or remove the obstacle.
	• Is direct sunlight or strong artificial light shining on the monitor's remote control sensor?	• Eliminate the light by closing curtains, pointing the light in a different direction, etc.
	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
	• The remote cable is plugged into the REMOTE IN terminal (Wired).	• Unplung the remote cable from the monitor.
	• The front panel buttons of the main unit do not function.	• The front panel buttons do not function during Control Lock.
No sound or picture is produced.	• Is the monitor's power cord plugged into a power outlet?	• Plug the monitor's power cord into a power outlet.
Picture appears but no sound is produced.	• Is the volume set at the minimum?	• Increase the volume.
	• Is the mute mode set? • Are the speakers properly connected?	• Press the remote control's MUTE button. • Connect the speakers properly.
	• Is AUDIO INPUT set correctly?	• Set AUDIO INPUT on the OPTION menu correctly.
Poor picture with VIDEO signal input.	• Improper control setting. Local interference. Cable interconnections. Input impedance is not correct level.	• Adjust picture control as needed. Try another location for the monitor. Be sure all connections are secure.
Poor picture with RGB signal input.	• Improper control setting. Incorrect 15 PIN connector pin connections.	• Adjust picture controls as needed. Check pin assignments and connections.
Tint is poor or colors are weak.	• Are the tint and colors properly adjusted?	• Adjust the tint and color (under "PICTURE").
Nothing appears on screen.	• Is the computer's power turned on?	• Turn on the computer's power.
	• Is a source connected?	• Connect source to the monitor.
	• Is the power management function in the standby or off mode?	• Operate the computer (move the mouse, etc.).
Part of picture is cut off or picture is not centered.	• Is the position adjustment appropriate?	• Adjust the "SCREEN" properly.
Image is too large or too small.	• Is the screen size adjustment appropriate?	• Press the "WIDE" button on the remote control and adjust properly.
Picture is unstable.	• Is the computer's resolution setting appropriate?	• Set to the proper resolution.
POWER/STANDBY indicator is lighted in orange or red.	• Horizontal and / or vertical sync signal is not present when the Intelligent Power Manager control is on.	• Check the input signal.
POWER/STANDBY indicator is blinking in red.	• The temperature inside the main unit has become too high and has activated the protector.	• Promptly switch off the power of the main unit and wait until the internal temperature drops. See*1.
POWER/STANDBY indicator is blinking in green and red, or green.	———	• Prompty switch off the power of the main unit. See *2.

*1 Overheat protector

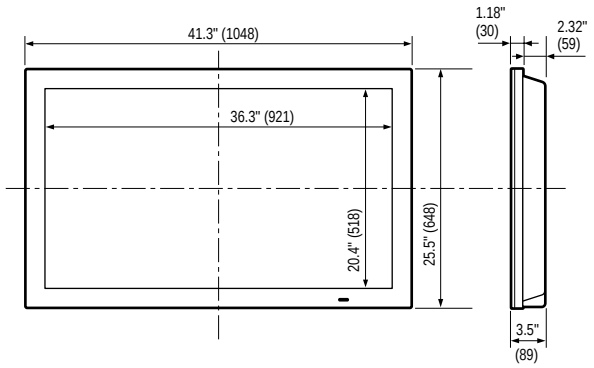
If the monitor becomes too hot, the overheat protector will be activated and the monitor will be turned off. If this happens, turn off the power to the monitor and unplug the power cord. If the room where the monitor is installed is particularly hot, move the monitor to a cooler location and wait for the monitor to cool for 60 minutes. If the problem persists, contact your Toshiba dealer for service.

*2 In the following case, power off the monitor immediately and contact your dealer or authorized Toshiba Service Center.

The monitor turns off 5 seconds after powering on and then the POWER/STANDBY indicator blinks. It indicates that the power supply circuit or plasma display panel or, temperature sensor has been damaged.

Specifications

Product Name	Plasma monitor 42WP26H/42WP26K/ 42WP26R
Screen Size	36.3"(H)×20.4"(V) inches 921(H)×518(V) mm diagonal 42"
Aspect Ratio	16 : 9
Resolution	853(H)×480(V) pixels
Pixel Pitch	0.04"(H)×0.04"(V) inches 1.08(H)×1.08(V) mm
Color Reproduction	256 levels, 16,770,000 colors
Signals	
Synchronization Range	Horizontal : 15.5 to 93.8 kHz (automatic : step scan) Vertical : 50.0 to 120 Hz (automatic : step scan)
Input Signals	RGB, NTSC (3.58/4.43), PAL (B,G,M,N), PAL60, SECAM, HD*1 , DVD*1 , DTV*1
Input Terminals	
RGB	
Visual 1 (Analog)	mini D-sub 15-pin×1
Visual 2 (Analog)	BNC (R, G, B, H/CS, V)×1*2
Visual 3 (Digital)	DVI-I 29-pin×1*3 (Not compatible with analog input)
Video	
Visual 1	RCA-pin×1
Visual 2	S-Video: DIN 4-pin×1
Visual 3	BNC (G/Y/VIDEO3)×1*2
DVD/HD/DTV	
Visual 1	RCA-pin (Y, PB[CB], PR[CR])×1*1
Visual 2	BNC (Y, PB[CB], PR[CR])×1*1, *2
Audio	Stereo RCA×3(selectable)
External Control	D-sub 9-pin×1(RS-232C)
Sound output	7W+7W at 6 ohm
Power Supply	AC120V 50/60Hz
Current Rating	3.9A (maximum)
Power Consumption	280W (typical)
Dimensions	41.3 (W)×25.5 (H)×3.5 (D) inches 1048 (W)×648 (H)×89(D) mm
Weight	61.8 lbs / 28.5 kg
Environmental Considerations	
Operating Temperature	0°C to 40°C / 32°F to 104°F
Humidity	20 to 80% (no condensation)
Storage Temperature	-10°C to 50°C / 14°F to 122°F
Humidity	10 to 90% (no condensation)
Front Panel User Controls	Power on/off, Input source select, Volume up/down, OSM control
Remote Control Functions	Power on/off, Input source select, OSM control,Volume up/down, Cursor (UP, DOWN,LEFT, RIGHT), Pointer, Zoom up/ down, Off timer, Wireless/ Wired remote control
OSM Functions	Picture (Contrast / Brightness / Sharpness/ Color / Tint / Picture mode / Color temperature/ Noise reductions), Sound (Bass / Treble/ Balance),Screen (V-Position / H-Position/ V-Height / H-Width /Auto Picture / Fine picture/ Picture adjustment), Function (OSM/ OSM adjustment/ Power management/ Gray level/ Cinema mode/ RGB3 Adjustment, Long Life (PLE, Orbiter, Inverse, White, Screen Wiper)/ Reset)/Option (Audio input/ BNC select/ RGBselect/ HD select), Information (Frequency / Language* / Color system) *English, German, French, Italian, Spanish, Swedish, Japanese



Units are in inch
(mm)

The features and specifications may be subject to change without notice.

***1 HD/DVD/DTV input signals supported on this system**

480P (60 Hz)	480I (60 Hz)
525P (60 Hz)	525I (60 Hz)
576P (50 Hz)	576I (50 Hz)
625P (50 Hz)	625I (50 Hz)
720P (60 Hz)	1035I (60 Hz)
1080I (50 Hz)	1080I (60 Hz)

***2 The 5-BNC connectors are used as RGB/PC2, HD/ DVD2 and VIDEO3 input. Select one of them under "BNC SELECT".**

***3 It doesn't cope with copy protection.**

Other Features	3D motion adaptive Scan Converter with 2-2 (50Hz), 2-3 (60Hz) pull down Converter, Digital Zoom function (100-900% Selectable), Self Diagnosis, Anti Image Burn, Color Temperature Select, Control Lock, Power management, Plug and play (DDC1, DDC2b, RGB3: DDC2b only)
Accessories	Remote control with two AAA batteries, Remote cable, RGB cable (Mini D-Sub 15-pin to Mini D-Sub 15-pin connector), Power cord, User's Manual, Safety metal fittings, Screw for Safety metal fittings, Ferrite cores, Bands
Regulations	UL Approved (UL 60950/ CSA 60950) DOC Canada requirements Meets FCC class A requirements

TOSHIBA

Printed in Japan

TOSHIBA

PLASMA MONITOR

User's Manual

Bedienungshandbuch

Manuel de l'utilisateur

Manual del Usuario

Manuale d'uso

Bruksanvisning

User's Manual

Bedienungshandbuch

Manuel de l'utilisateur

Manual del Usuario

Manuale d'uso

Bruksanvisning

Important Information

Precautions

Please read this manual carefully before using your Toshiba plasma monitor and keep the manual handy for future reference.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS, UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Warning

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Warnings and Safety Precaution

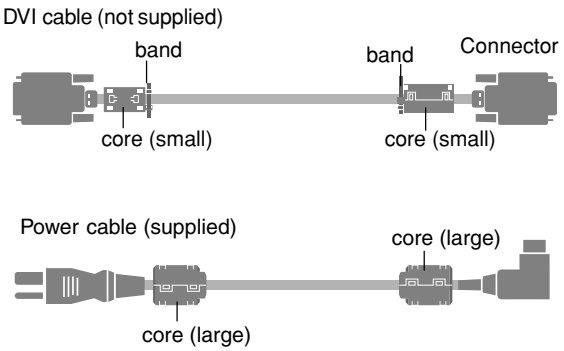
The Toshiba plasma monitor is designed and manufactured to provide long, trouble-free service. No maintenance other than cleaning is required. Use a soft dry cloth to clean the panel. Never use solvents such as alcohol or thinner to clean the panel surface.

The plasma display panel consists of fine picture elements (cells). Although Toshiba produces the plasma display panels with more than 99.99 percent active cells, there may be some cells that do not produce light or remain lit.

For operating safety and to avoid damage to the unit, read carefully and observe the following instructions. To avoid shock and fire hazards:

1. Provide adequate space for ventilation to avoid internal heat build-up. Do not cover rear vents or install the unit in a closed cabinet or shelves.
   If you install the unit in an enclosure, make sure there is adequate space at the top of the unit to allow hot air to rise and escape. If the monitor becomes too hot, the overheat protector will be activated and the monitor will be turned off. If this happens, turn off the power to the monitor and unplug the power cord. If the room where the monitor is installed is particularly hot, move the monitor to a cooler location, and wait for the monitor to cool for 60 minutes. If the problem persists, contact your Toshiba dealer for service.
2. Do not use the power cord polarized plug with extension cords or outlets unless the prongs can be completely inserted.
3. Do not expose the unit to water or moisture.
4. Avoid damage to the power cord, and do not attempt to modify the power cord.
5. Unplug the unit during electrical storms or if the unit will not be used over a long period.
6. Do not open the cabinet which has potentially dangerous high voltage components inside. If the unit is damaged in this way the warranty will be void. Moreover, there is a serious risk of electric shock.
7. Do not attempt to service or repair the unit. Toshiba is not liable for any bodily harm or damage caused if unqualified persons attempt service or open the back cover. Refer all service to authorized Service Centers.

NOTE:
When you connect a computer to this monitor, attach the supplied ferrite cores. If you do not do this, this monitor will not comform to mandatory CE or C-Tick standards.
Attaching the ferrite cores:
Set the ferrite cores on both ends of the DVI cable (not supplied), and both ends of the power cable (supplied). Close the lid tightly until the clamps click.
Use the band to fasten the ferrite core (supplied) to the DVI cable.



To avoid damage and prolong operating life:

1. Use only with 100-240V 50/60Hz AC power supply. Continued operation at line voltages greater than 100-240 Volts AC will shorten the life of the unit, and might even cause a fire hazard.
2. Handle the unit carefully when installing it and do not drop.
3. Set the unit away from heat, excessive dust, and direct sunlight.
4. Protect the inside of the unit from liquids and small metal objects. In case of accident, unplug the unit and have it serviced by an authorized Service Center.
5. Do not hit or scratch the panel surface as this causes flaws on the surface of the screen.
6. For correct installation and mounting it is strongly recommended to use a trained,authorized dealer.
7. As is the case with any phosphor-based display (like a CRT monitor, for example) light output will gradually decrease over the life of a Plasma Display Panel.

Recommendations to avoid or minimize phosphor burn-in

Like all phosphor-based display devices and all other gas plasma displays, plasma monitors can be susceptible to phosphor burn under certain circumstances. Certain operating conditions, such as the continuous display of a static image over a prolonged period of time, can result in phosphor burn if proper precautions are not taken. To protect your investment in this plasma monitor, please adhere to the following guidelines and recommendations for minimizing the occurrence of image burn:

* Always enable and use your computer's screen saver function during use with a computer input source.
* Display a moving image whenever possible.
* Change the position of the menu display from time to time.
* Always power down the monitor when you are finished using it.

If the plasma monitor is in long term use or continuous operation take the following measures to reduce the likelihood of phosphor burn:

* Lower the Brightness and Contrast levels as much as possible without impairing image readability.
* Display an image with many colors and color gradations (i.e. photographic or photo-realistic images).
* Create image content with minimal contrast between light and dark areas, for example white characters on black backgrounds. Use complementary or pastel color whenever possible.
* Avoid displaying images with few colors and distinct, sharply defined borders between colors.

Contact an Toshiba affiliate or authorized dealer for other recommended procedures that will best suit your particular application needs.

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How to Attach Options to the Plasma Monitor

You can attach your optional mounts or stand to the plasma monitor in one of the following two ways:

* While it is upright. (See Drawing A)
* As it is laid down with the screen face down (See Drawing B). Lay the protective sheet, which was wrapped around the monitor when it was packaged, beneath the screen surface so as not to scratch the screen face.

- **This device cannot be installed on its own. Be sure to use a stand or original mounting unit. (Wall mount unit, Stand, etc.)**

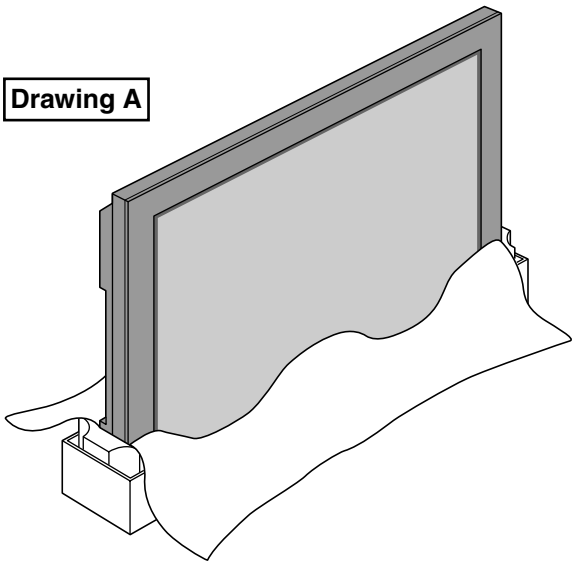
*** See page E-2.**

- **For correct installation and mounting it is strongly recommended to use a trained, authorized dealer.**

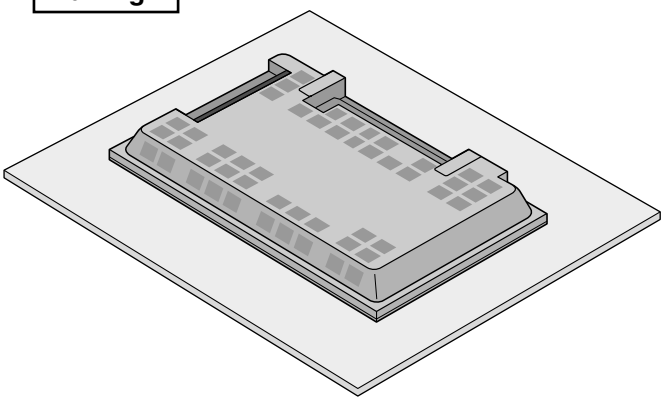
  Failure to follow correct mounting procedures could result in damage to the equipment or injury to the installer.

  Product warranty does not cover damage caused by improper installation.

Drawing A

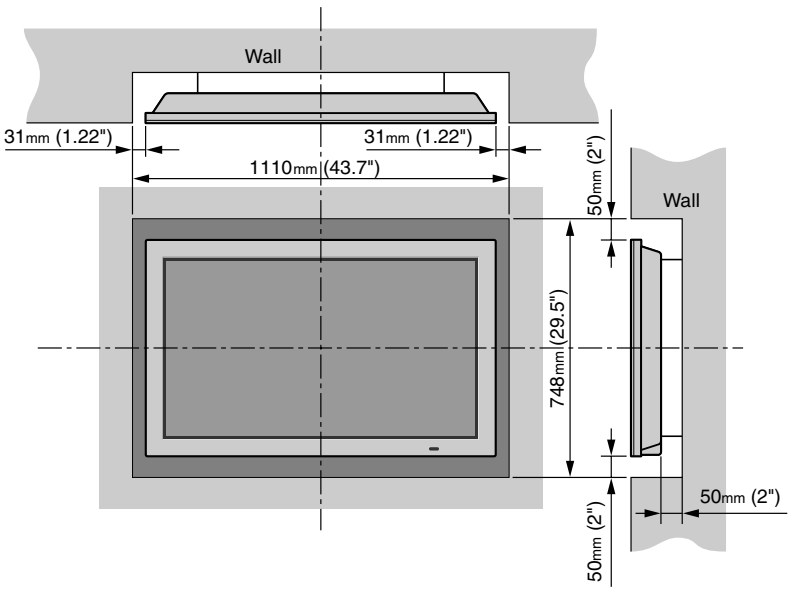


Drawing B



Ventilation Requirements for enclosure mounting

To allow heat to disperse, leave space between surrounding objects as shown on the diagram below when installing.



Introduction

Introduction to the Plasma Monitor

Toshiba plasma monitor is a seamless blend of cutting-edge visual technology and sophisticated design. At 42-inches, with a 16:9 aspect ratio, the Plasma monitor certainly makes a big impression. However, at a mere 3.5 inches/ 89 mm thin, the monitor's sleek techno-art lines blend in well with your environment. Vivid image quality will transform data from any graphic medium from PCs to DVD players- into art. And weighing only 61.8 lbs/ 28.5 kg, it actually can be hung almost anywhere. Toshiba has made sure that a host of multimedia resources can be easily connected and displayed as brilliantly as intended on the plasma monitor.

The features you'll enjoy include:

- 42-inch screen
- 16:9 aspect ratio
- Capsulated Color Filter (CCF) and black matrix
- 3.5 inch / 89 mm thin
- 61.8 lbs/ 28.5 kg light
- High-resolution screen: 853×480 pixels
- 160-degrees of off-axis viewing, horizontally and vertically.
- Flicker - and warp - free display provides excellent image geometry even in screen corners
- Not affected by magnetic fields, no color drift or edge distortion.
- VGA, SVGA, XGA, SXGA, UXGA computer signal compatibility
- NTSC, PAL, SECAM, composite and S-Video signal compatibility
- 480P, 1080I, 720P and HDTV signal compatibility
- PCs, VCRs, Laser Disc and DVD player source compatibility
- AccuBlend scan conversion automatically converts SVGA, XGA, SXGA and UXGA signals to the panel's native resolution
- Advanced Mass Area Sampling Progressive Scan method is employed.
- RGB input (3*), Video input (3*), DVD/HD input (2*), Audio input (3), External Control input (1)
- AccuColor control system provides user selectable on-screen color temperature settings
- New Drive Technology
- Component video input terminal for DVD, 15.75kHz (Y, C_B, C_R)
- Digital broadcasting source compatibitly
- Seven languages (English, German, French, Italian, Spanish, Swedish, and Japanese)

* You can select RGB source, Component source or Video source for the 5BNC terminal. When selecting an RGB input, the source is switched to the RGB input (3); when selecting a component input, the source is switched to the DVD/HD input (2); when selecting a Video source, the source is switched to the Video input (3).

Contents of the Package

- ☐ Plasma monitor
- ☐ Power cord
- ☐ RGB cable (Mini D-Sub 15-pin to Mini D-Sub 15-pin connector)
- ☐ Remote control with two AAA Batteries
- ☐ User's manual
- ☐ Remote cable
- ☐ Safety metal fittings*
- ☐ Screws for safety metal fitting*
- ☐ Ferrite core (small×2, large×2), band

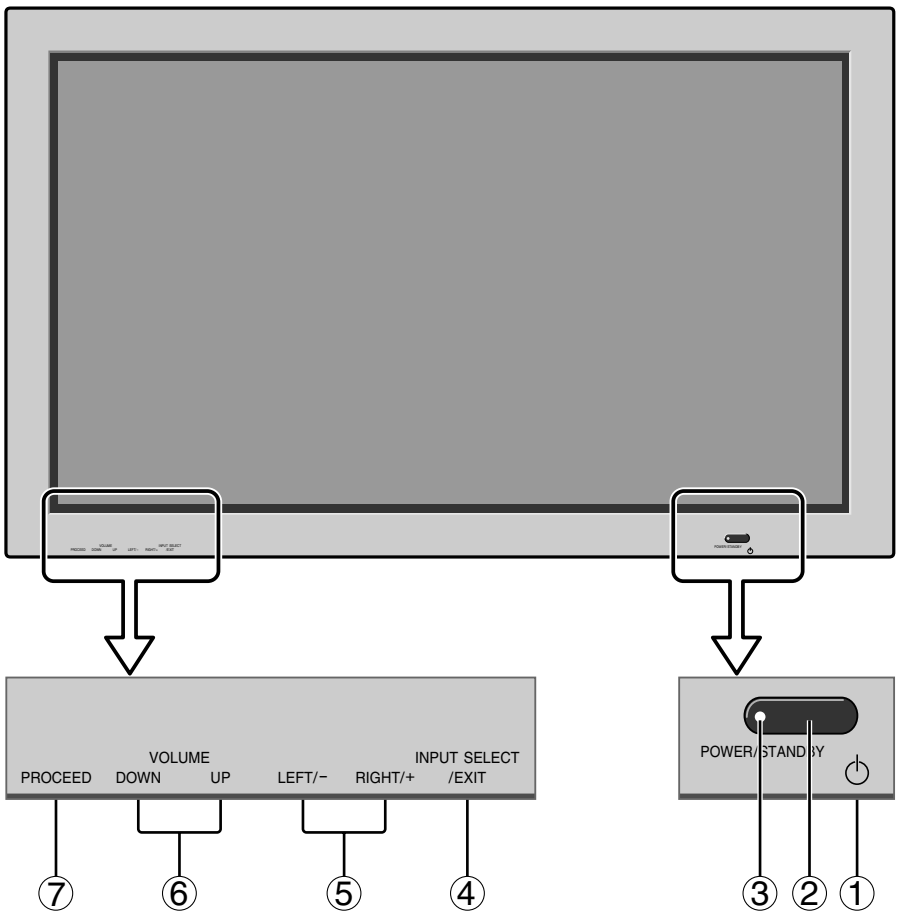
* These are fittings for fastening the unit to a wall to prevent tipping due to external shock when using the stand (option). Fasten the safety fittings to the holes in the back of the monitor using the safety fitting mount screws.

Options

- Wall mount unit
- Ceiling mount unit
- Tilt mount unit
- Stand
- Attachable speakers
- Pole unit
- Horizontal pole mount unit

Part Names and Function

Front View



① **Power**
Turns the monitor's power on and off.

② **Remote sensor window**
Receives the signals from the remote control.

③ **POWER/STANDBY indicator**
When the power is on ..... Lights green.
When the power is in the standby mode ... Lights red.

④ **INPUT SELECT / EXIT**
Switches the input, in the following order.
The available inputs depend on the setting of "BNC SELECT".

RGB: → VIDEO1 → VIDEO2 → HD/DVD/DTV → RGB/PC3 ← RGB/PC2 ← RGB/PC1 ←

COMP.: → VIDEO1 → VIDEO2 → HD1/DVD1/DTV1 → RGB/PC3 ← RGB/PC1 ← HD2/DVD2/DTV2 ←

VIDEO: → VIDEO1 → VIDEO2 → VIDEO3 → RGB/PC3 ← RGB/PC1 ← HD/DVD/DTV ←

SCART: → VIDEO1 → VIDEO2 → HD1/DVD1/DTV1 → RGB/PC3 ← RGB/PC1 ← DVD2 ←

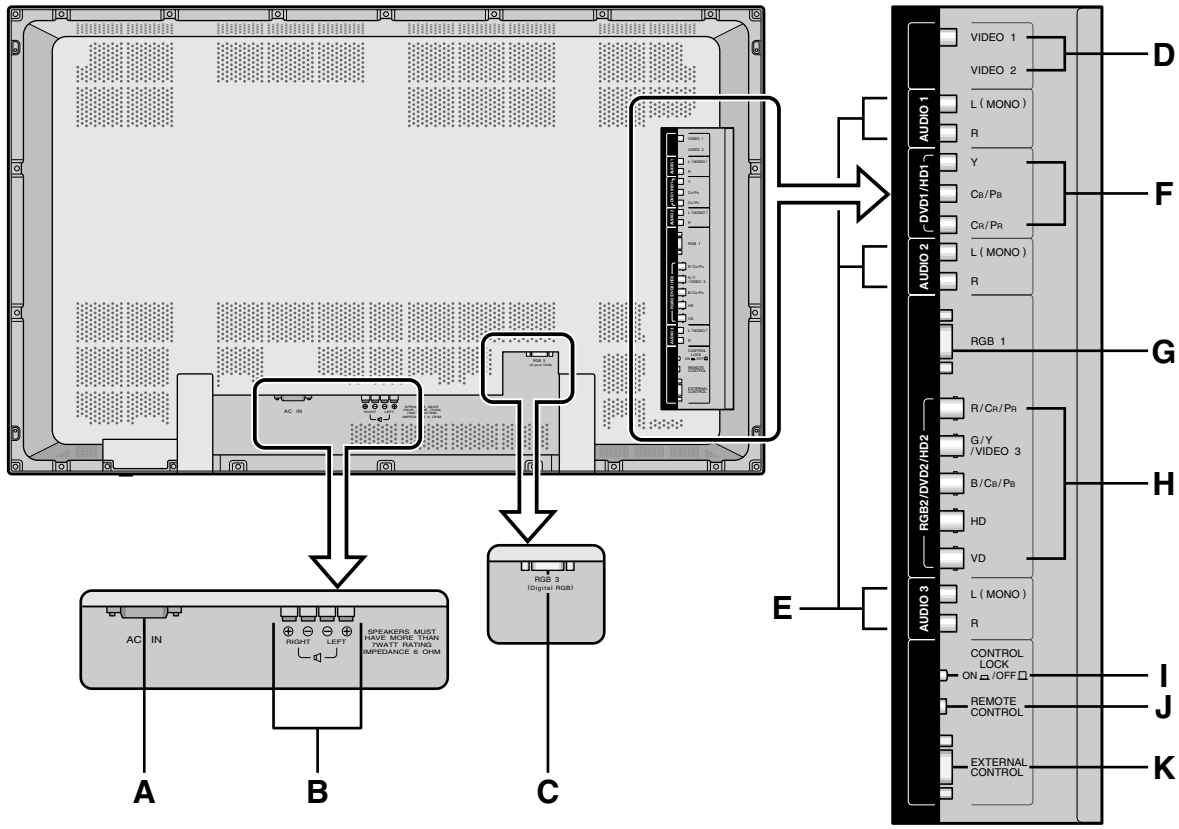
Functions as the EXIT buttons in the On-Screen Menu (OSM) mode.

⑤ **LEFT/– and RIGHT/+**
Enlarges or reduces the image. Functions as the CURSOR (◀ / ▶) buttons in the On-Screen Menu (OSM) mode.

⑥ **VOLUME DOWN and UP**
Adjusts the volume. Functions as the CURSOR (▲/▼) buttons in the On-Screen Menu (OSM) mode.

⑦ **PROCEED**
Sets the On-Screen Menu (OSM) mode and displays the main menu.

Rear View/ Terminal Board



A AC IN
Connect the included power cord here.

B EXT SPEAKER L and R
Connect speakers here. Maintain the correct polarity.

C RGB3 (DVI 29pin)
Inputs a digital RGB signal (TMDS).

D VIDEO1, 2
Connect VCR's, DVD's or Laser Discs, etc. here.

E AUDIO1, AUDIO2, AUDIO3
These are audio input terminals.
The input is selectable. Set which video image to allot them to on the menu screen.

F DVD1 / HD1
Connect DVD's, High Definition or Laser Discs, etc. here.

G RGB1
Inputs the analog RGB signal of personal computer, etc.

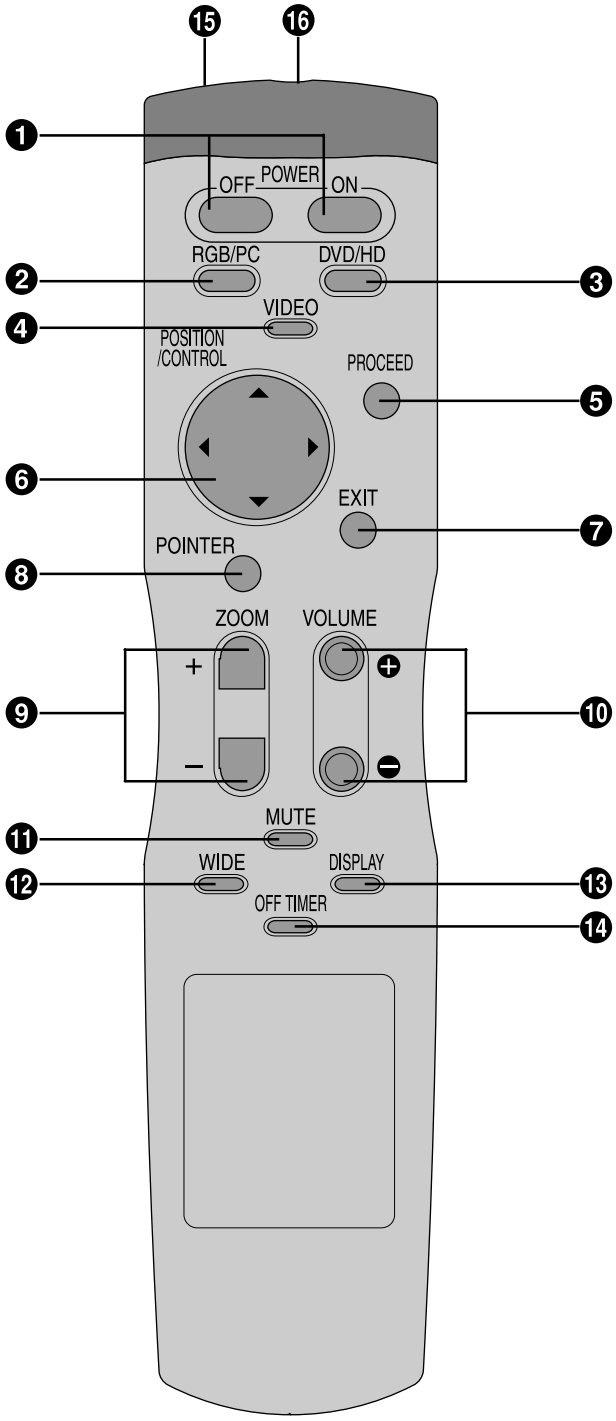
H RGB2/ DVD2/ HD2
RGB2: Inputs the analog RGB signal.
DVD2/ HD2: Connect DVD's, High Definition or Laser Discs, etc. here.
VIDEO3: Connect VCR's, DVD's or Laser Discs, etc. here.

I CONTROL LOCK
When "CONTROL LOCK" is set "ON", the buttons on the set's control panel do not function.

J REMOTE CONTROL
Connect the supplied remote cable here.

K EXTERNAL CONTROL
This terminal is used when power ON/OFF, input selection and AUDIO MUTE and other controls are operated externally (by external control). See also page E-39 for external control.

Remote Control



❶ **POWER ON/OFF**
Switches Power ON/OFF.
(This does not operate when POWER/STANDBY indicator of the main unit is off.)

❷ **RGB/PC**
Press this button to select RGB/PC as the source.
The available sources depend on the setting of "BNC SELECT".
RGB: → RGB/PC1 → RGB/PC2 → RGB/PC3

COMP. or VIDEO or SCART: → RGB/PC1 → RGB/PC3

RGB/PC can also be selected using the INPUT SELECT button on the monitor.

❸ **DVD / HD**
Press this button to select DVD/HD as the source.
The available sources depend on the setting of "BNC SELECT".
RGB or VIDEO: HD/DVD/DTV

COMP.: → HD1/DVD1/DTV1 → HD2/DVD2/DTV2

SCART: → HD1/DVD1/DTV1 → DVD2

DVD/HD can also be selected using the INPUT SELECT button on the monitor.

❹ **VIDEO**
Press this button to select VIDEO as the source.
The available sources depend on the setting of "BNC SELECT".
VIDEO: → VIDEO1 → VIDEO2 → VIDEO3

RGB or COMP. or SCART: → VIDEO1 → VIDEO2

VIDEO can also be selected using the INPUT SELECT button on the monitor.

❺ **PROCEED**
Press this button to access the OSM controls.
Press this button during the display of the main menu to go to the sub menu.

❻ **CURSOR (▲ / ▼ / ◀ / ▶)**
Use these buttons to select items or settings and to adjust settings or switch the display patterns.

❼ **EXIT**
Press this button to exit the OSM controls in the main menu. Press this button during the display of the sub menu to return to the main menu.

❽ **POINTER**
Press this button to display the pointer.

❾ **ZOOM (+ /–)**
Enlarges or reduces the image.

❿ **VOLUME (+ /–)**
Adjusts the volume.

⓫ **MUTE**
Mutes the sound.

⓬ **WIDE**
The type of broadcast is detected automatically, and the recommended wide screen is set.

⓭ **DISPLAY**
Displays the source settings on the screen.

⓮ **OFF TIMER**
Activates the off timer for the unit.

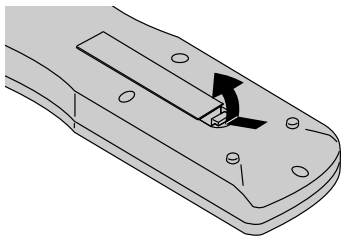
⓯ **Remote control signal transmitter**
Transmits the remote control signals.

⓰ **Remote Jack**
Insert the plug of the supplied remote cable here when using the supplied remote control in the wired condition.

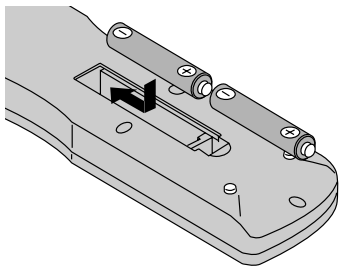
Battery Installation and Replacement

Insert the 2 “AAA” batteries, making sure to set them in with the proper polarity.

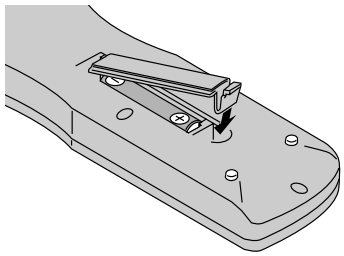
1. Press and open the cover.



2. Align the batteries according to the (+) and (–) indication inside the case.



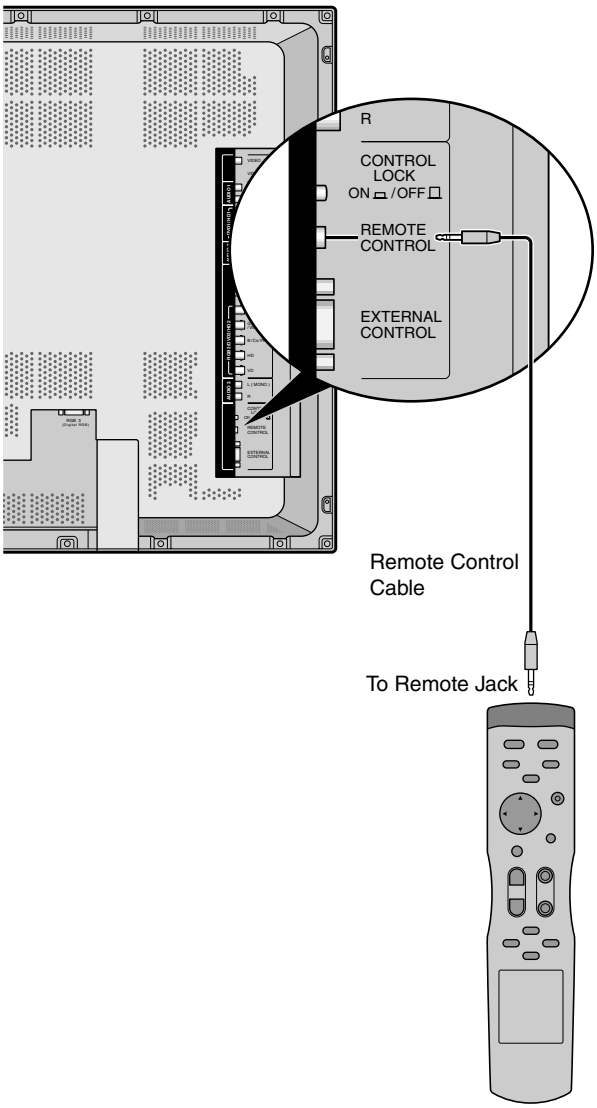
3. Replace the cover.



Using the wired remote control mode

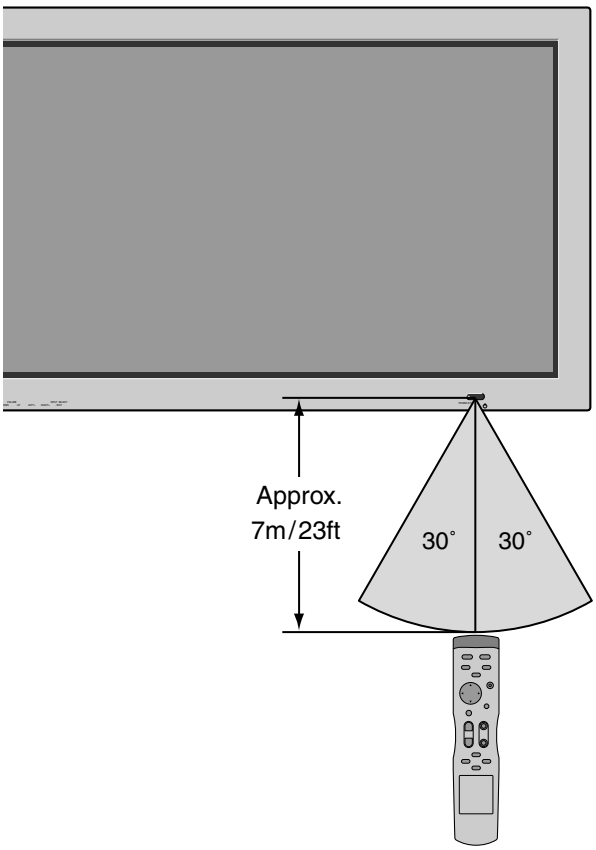
Connect the supplied remote cable to the remote control's remote jack and the "REMOTE CONTROL" terminal on the monitor.

When the cable is connected, the mode automatically switches to wired remote control. When the wired remote control mode is used, the remote control can be operated even if no batteries are loaded.



Operating Range

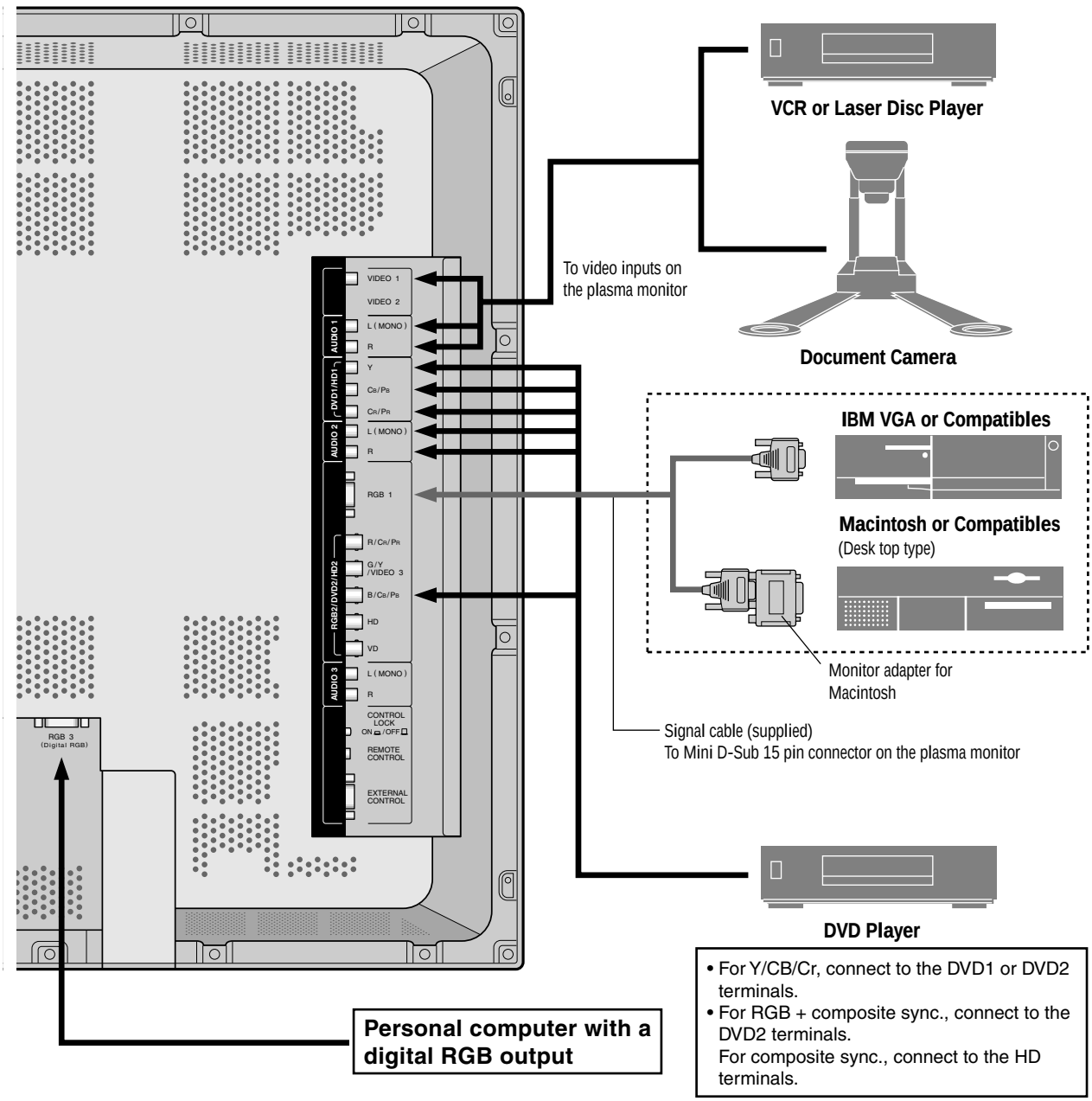
* Use the remote control within a distance of about 7 m/ 23ft. from the front of the monitor's remote control sensor and at horizontal and vertical angles of up to approximately 30°.
* The remote control operation may not function if the monitor's remote control sensor is exposed to direct sunlight or strong artificial light, or if there is an obstacle between the sensor and the remote control.



Handling the remote control

- Do not drop or mishandle the remote control.
- Do not get the remote control wet. If the remote control gets wet, wipe it dry immediately.
- Avoid heat and humidity.
- When not using the remote control for a long period, remove the batteries.
- Do not use new and old batteries together, or use different types together.
- Do not take apart the batteries, heat them, or throw them into a fire.
- When using the remote control in the wireless condition, be sure to unplug the remote cable from the REMOTE CONTROL terminal on the monitor.

Installation



- For Y/CB/Cr, connect to the DVD1 or DVD2 terminals.
- For RGB + composite sync., connect to the DVD2 terminals.
  For composite sync., connect to the HD terminals.

Connecting Your PC or Macintosh Computer

Connecting your PC or Macintosh computer to your plasma monitor will enable you to display your computer's screen image for an impressive presentation. The plasma monitor supports the signals described on page E-53.
To connect a PC, Macintosh or compatible graphics adapter, simply:

1. Turn off the power to your plasma monitor and computer.
2. If your PC does not support SXGA/XGA/SVGA/VGA you will need to install an SXGA/XGA/SVGA/VGA graphics board. Consult your computer's owner's manual for your SXGA/XGA/SVGA/VGA configuration. If you need to install a new board, see the manual that comes with your new graphics board for installation instructions.
3. The plasma monitor provides signal compatibility up to VESA 1600 × 1200 (UXGA). However, it is not recommended to use this resolution due to image readability on the monitors 853 × 480 native pixel resolution panel.
4. Use the signal cable that's supplied to connect your PC or Macintosh computer to the plasma monitor. For Macintosh, use the monitor adapter to connect to your computer's video port.
5. Turn on the plasma monitor and the computer.
6. If the plasma monitor goes blank after a period of inactivity, it may be caused by a screen saver installed on the computer you've connected to the plasma monitor.

When using a Macintosh with the plasma monitor, the following four display standards are supported using the Macintosh adapter :

13" fixed mode
16" fixed mode
19" fixed mode
21" fixed mode

The 13" fixed mode is recommended for the plasma monitor.

Connections with Equipment that has a Digital Interface

Connections can be made with equipment that is equipped with a digital interface compliant with the DVI (Digital Visual Interface) standard.

* Use a DVI 29-pin signal cable and the ferrite cores (supplied) when making connections to the RGB3 IN (DVI) connector of the main unit.
  Note that the RGB3 IN(DVI) terminal does not support analog RGB input source.

Note:

1. *Input TMDS signals conforming to DVI standards. The TMDS input corresponds to 1 link.*
2. *To maintain display quality, use a cable with a quality prescribed by DVI standards that is within 5 meters in length.*

Connecting Your Document Camera

You can connect your plasma monitor to a document camera. To do so, simply:

1. Turn off the power to your plasma monitor and document camera.
2. Use a standard video cable to connect your document camera to the Video input on your plasma monitor.
3. Turn on the plasma monitor and the document camera.

Note: *Refer to your document camera owner's manual for more information about your camera's video output requirements.*

Connecting Your VCR or Laser Disc Player

Use common RCA cables (not provided) to connect your VCR or laser disc player to your plasma monitor. To make these connections, simply:

1. Turn off the power to your plasma monitor and VCR or laser disc player.
2. Connect one end of your RCA cable to the video output connector on the back of your VCR or laser disc player, connect the other end to the Video input on your plasma monitor. Use standard RCA audio patch cords to connect the audio from your VCR or laser disc player to your plasma monitor (if your VCR or laser disc player has this capability). Be careful to keep your right and left channel connections correct for stereo sound.
3. Turn on the plasma monitor and the VCR or laser disc player.

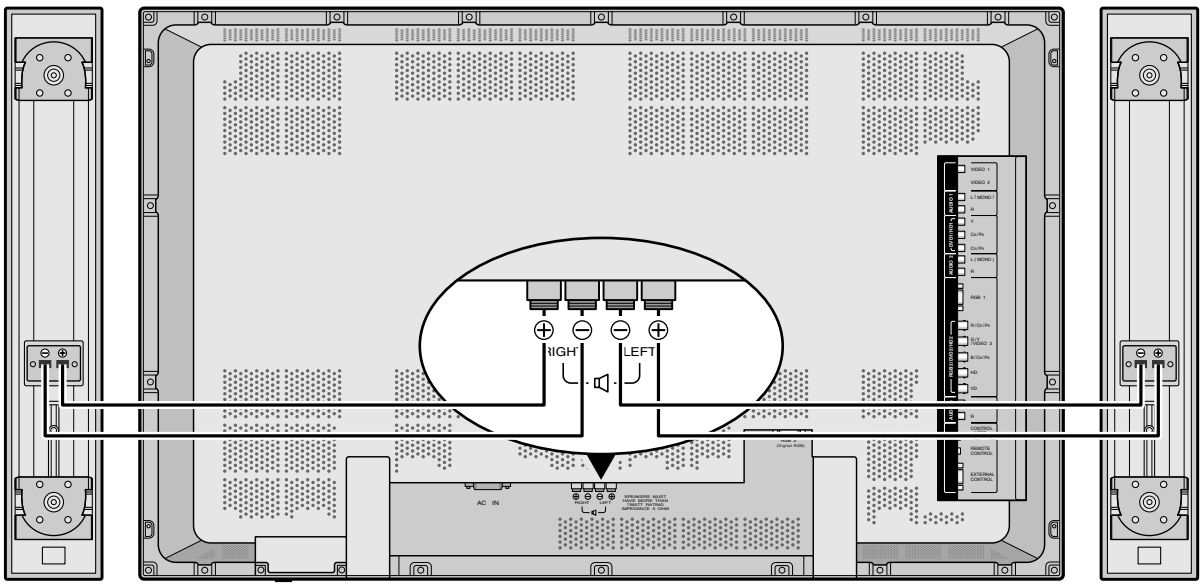
Note: *Refer to your VCR or laser disc player owner's manual for more information about your equipment's video output requirements.*

Connecting Your DVD Player

You can connect your plasma monitor to a DVD player. To do so, simply:

1. Turn off the power to your plasma monitor and DVD player.
2. Use a standard video cable to connect your DVD player to the Y, Cb, and Cr inputs on your plasma monitor. Or use the DVD-player's S-Video output. Use a standard S-Video cable to connect to the S-Video input on the plasma monitor.
3. Turn on the plasma monitor and the DVD player.

Attachable Speaker Connections



Attachable speakers (option) may be connected to the plasma monitor to reproduce sound from VIDEO, DVD or RGB signal sources.

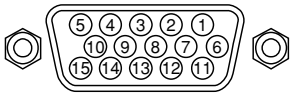
Attachable speakers may be connected directly to the SPEAKERS terminals or indirectly by connecting a stereo system amplifier to the audio outputs.

CAUTION: *Unplug the plasma monitor and all connected components before connecting external speakers. Use only speakers with 6-ohm impedance and a power input rating of 7 watts or more.*

To connect attachable speakers directly to the plasma monitor:

1. Strip the ends of the speaker wires.
2. Press down the tabs below the SPEAKERS terminals, insert the speaker wire and release the tab to secure the speaker wire connection:
   - [a] Connect the right speaker (located at right side of the monitor when viewed from the front) positive (+) wire to RIGHT +.
   - [b] Connect the right speaker negative (–) wire to RIGHT –.
   - [c] Connect the left speaker negative (–) wire to LEFT–.
   - [d] Connect the left speaker positive (+) wire to LEFT+.

Pin Assignments and Signal Levels for 15 pin RGB (Analog)

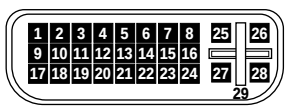


Pin No.	Signal (Analog)
1	Red
2	Green or sync-on-green
3	Blue
4	No connection
5	Ground
6	Red ground
7	Green ground
8	Blue ground
9	No connection
10	Sync signal ground
11	No connection
12	Bi-directional DATA (SDA)
13	Horizontal sync or Composite sync
14	Vertical sync
15	Data clock

Pin Configuration and Signal of the RGB 3 IN Connector (DVI Connector)

The unit is equipped with a type of connector commonly used for both analog and digital.
(Functionally, this cannot be used for an analog input.)
(TMDS can be used for one link only.)

RGB 3



Pin No.	Signal (Digital)
1	T.M.D.S Data 2 -
2	T.M.D.S Data 2 +
3	T.M.D.S Data 2 Shield
4	No connection
5	No connection
6	DDC Clock
7	DDC Data
8	No connection
9	T.M.D.S Data 1 -
10	T.M.D.S Data 1 +
11	T.M.D.S Data 1 Shield
12	No connection
13	No connection
14	+5V Power
15	Ground
16	Hot Plug Detect
17	T.M.D.S Data 0 -
18	T.M.D.S Data 0 +
19	T.M.D.S Data 0 Shield
20	No connection
21	No connection
22	T.M.D.S Clock Shield
23	T.M.D.S Clock +
24	T.M.D.S Clock -
25	No connection
26	No connection
27	No connection
28	No connection
29	No connection

Basic Operations

POWER

To turn the unit ON and OFF:

1. Plug the power cord into an active AC power outlet.
2. Press the POWER ON button (on the remote control) to turn on the unit.

   The monitor's POWER/STANDBY indicator will light up (green) when the unit is on.
3. Press the POWER OFF button (on the remote control or the unit) to turn off the unit.

   The monitor's POWER/STANDBY indicator turns red and the standby mode is set (only when turning off the unit with the remote control).

VOLUME

To adjust the volume:

1. Press and hold the VOLUME ⊕ button (on the remote control or the unit) to increase to the desired level.
2. Press and hold the VOLUME ⊖ button (on the remote control or the unit) to decrease to the desired level.

MUTE

To cancel the sound:

Press the MUTE button on the remote control to cancel the sound; press again to restore.

DISPLAY

To check the settings:

1. The screen changes each time the DISPLAY button is pressed.
2. If the button is not pressed for approximately three seconds, the menu turns off.

DIGITAL ZOOM

Digital zoom specifies the picture position and enlarges the picture.

1. Press the POINTER button to display the pointer. ( )

   To change the size of the picture:
   Press the ZOOM+ button and enlarge the picture. The pointer will change to resemble a magnifying glass. ( )
   A press of the ZOOM- button will reduce the picture and return it to its original size.

   To change the picture position:
   Select the position with the ▲▼◀▶ buttons.
2. Press the POINTER button to delete the pointer.

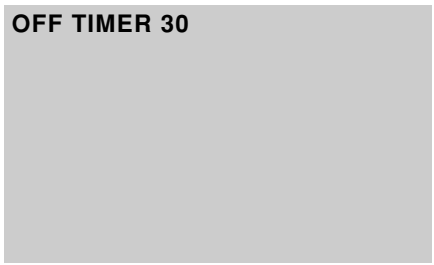
OFF TIMER

To set the off timer:

The off timer can be set to turn the power off after 30, 60, 90 or 120 minutes.

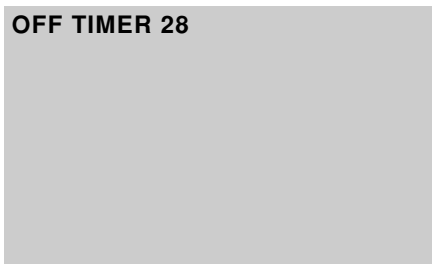
1. Press the OFF TIMER button to start the timer at 30 minutes.
2. Press the OFF TIMER button to the desired time.
3. The timer starts when the menu turns off.

→ 30 → 60 → 90 → 120 → 0



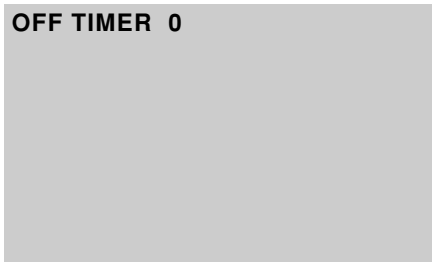
To check the remaining time:

1. Once the off timer has been set, press the OFF TIMER button once.
2. The remaining time is displayed, then turns off after a few seconds.
3. When five minutes remain the remaining time appears until it reaches zero.



To cancel the off timer:

1. Press the OFF TIMER button twice in a row.
2. The off timer is canceled.



Note:

After the power is turned off with the off timer ...
A slight current is still supplied to the monitor. When you are leaving the room or do not plan to use the system for a long period of time, turn off the power of the monitor.

WIDE Operations

Watching with a wide screen (manual)

With this function, you can select one of four screen sizes.

When watching videos or digital video discs

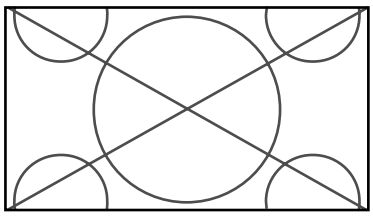
1. Press the WIDE button on the remote control.
2. *Within 3 seconds ...*

   Press the WIDE button again.

   The screen size switches as follows:

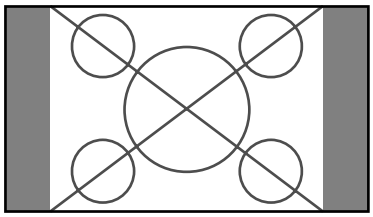
   → ZOOM → NORMAL → FULL → STADIUM →

ZOOM size screen



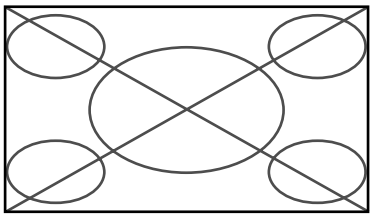
The picture is expanded in the horizontal and vertical direction, maintaining the original proportions.
* Use this for theater size (wide) movies, etc.

NORMAL size screen (4:3)



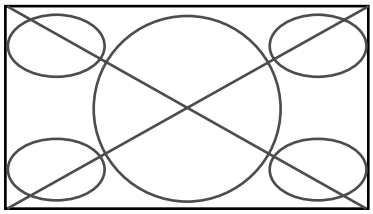
The normal size screen is displayed.
* The picture has the same size as video pictures with a 4 : 3 aspect ratio.

FULL size screen



The image is expanded in the horizontal direction.
* Images compressed in the horizontal direction ("squeezed images") are expanded in the horizontal direction and displayed on the entire screen. (Normal images are expanded in the horizontal direction.)

STADIUM size screen

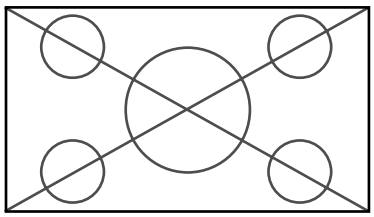


The picture is expanded in the horizontal and vertical directions at different ratios.
* Use this for watching normal video programs (4:3) with a wide screen.

When watching high definition video source

1. Press the WIDE button on the remote control.

FULL size screen (16 : 9)



The full size screen is displayed.
* The picture has the same size as video pictures (16 : 9).

Watching computer images with a wide screen

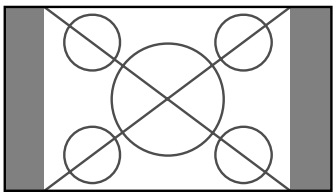
Switch to the wide screen mode to expand the 4 : 3 image to fill the entire screen.

1. Press the WIDE button on the remote control.
2. *Within 3 seconds ...*

   Press the WIDE button again.
   The screen size switches as follows:

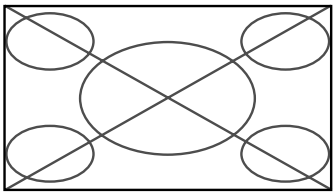
   → **NORMAL** → **FULL**

NORMAL size screen (4:3 or SXGA 5:4)



The picture has the same size as the normal computer image.

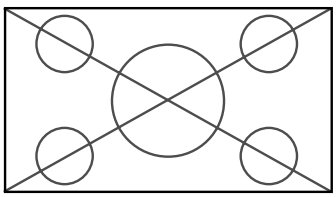
FULL size screen



The image is expanded in the horizontal direction.

When wide signals are input.

FULL size screen



Information

■ Supported resolution

See page E-53 for details on the display output of the various VESA signal standards supported by the monitor.

■ When 852 (848) dot × 480 line wide VGA* signals with a vertical frequency of 60 Hz and horizontal frequency of 31.7 (31.0) kHz are input

Select an appropriate setting for RGB SELECT mode referring to the"Table of Signals Supported" on page E-53.

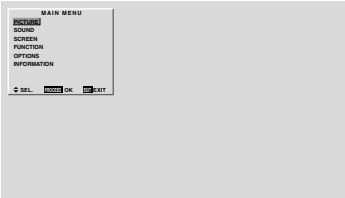
* " IBM PC/AT" and "VGA" are registered trademarks of IBM, Inc. of the United States.

OSM(On Screen Menu) Controls

Menu Operations

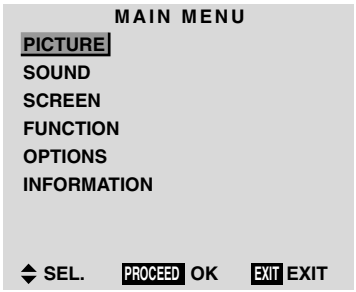
The OSM window is displayed with respect to the screen as shown on the diagram.

* Depending on the screen's mode, the OSM may be displayed differently.
  In the explanation, the OSM section is shown close up.



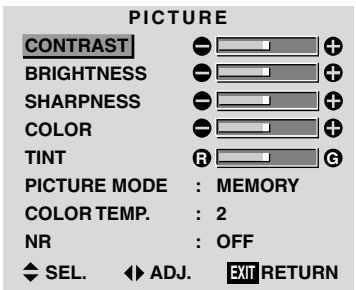
The following describes how to use the menus and the selected items.

1. Press the PROCEED button on the remote control to display the MAIN MENU.



2. Press the cursor buttons ▲ ▼ on the remote control to highlight the menu you wish to enter.

3. Press the PROCEED button on the remote control to select a submenu or item.



4. Adjust the level or change the setting of the selected item by using the cursor buttons ◀ ▶ on the remote control.

5. The change is stored until you adjust it again.

6. Repeat steps 2 – 5 to adjust an additional item, or press the EXIT button on the remote control to return to the main menu.

Note: *The main menu disappears by pressing the EXIT button.*

Main menu	Sub menu	Functions	Default	Reset
PICTURE	CONTRAST	Adjusts the contrast.	Center	Yes
	BRIGHTNESS	Adjusts the brightness.	Center	Yes
	SHARPNESS	Adjusts the sharpness.	Center/1	Yes
	COLOR	Adjusts the color.	Center	Yes
	TINT	Adjusts the tint.	Center	Yes
	PICTURE MODE	Sets the picture mode according to the VIDEO environment and image software.	MEMORY	Yes
	COLOR TEMP	Adjusts the color temperature and white balance.	2	Yes
	NR	Reduces noise visible in image.	OFF	Yes

Main menu	Sub menu	Functions	Default	Reset
SOUND	BASS	Sets the bass.	Center	Yes
	TREBLE	Sets the treble.	Center	Yes
	BALANCE	Sets the left/right balance.	Center	Yes

Main menu	Sub menu	Functions	Default	Reset
SCREEN	V-POSITION	Adjusts the vertical position.	Center	Yes
	H-POSITION	Adjusts the horizontal position.	Center	Yes
	V-HEIGHT	Adjusts the vertical size.	Min	Yes
	H-WIDTH	Adjusts the horizontal size.	Min	Yes
	AUTO PICTURE	Turn this on to have the monitor automatically adjust “FINE PICTURE” and “PICTURE ADJ”.	OFF*1	No
	FINE PICTURE	Adjusts for flickering on the computer image.	Min*1	Yes
	PICTURE ADJ.	Adjusts for striped patterns on the computer image.	Center*1	Yes

Main menu	Sub menu	Functions	Default	Reset
FUNCTION	OSM	Turns the on-screen menu (screen mode, etc.) off (when set to “OFF”). When set to “ON”, the on-screen menu is displayed.	ON	Yes
	OSM ADJ.	Adjusts the vertical and horizontal positions of the menu display.	1	Yes
	POWER MGT	Sets the monitor for use as an energy-saving display when used with a computer.	OFF	Yes
	GRAY LEVEL	In case of 4 : 3, sets the luminance of both sides.	3	Yes
	CINEMA MODE	Sets the picture to suit the movie.	ON	Yes
	RGB3 ADJ.	Adjusts the picture when the picture input from the RGB3 input terminal is distorted.	1	Yes
	LONG LIFE	Sets the picture to reduce burn-in of the display.	*2	Yes
	RESET	Resets all the settings (PICTURE, SOUND, SCREEN, FUNCTION, etc.) to the factory default values.	—	—

Main menu	Sub menu	Functions	Default	Reset
OPTIONS	AUDIO INPUT	Sets the allocation of the audio connectors.	*3	Yes
	BNC SELECT	Sets the BNC connectors.	RGB	Yes
	RGB SELECT	Sets the appropriate mode for the computer image. RGB (VGA signals), VIDEO (Moving picture), WIDE (WIDE VGA) DTV.	AUTO	Yes
	HD SELECT	Sets the digital broadcasting (1080A,1080B) or the High Vision (1035I).	1080B	No

Main menu	Sub menu	Functions	Default	Reset
INFORMATION	FREQUENCY	Used to check the frequency and synchronizing polarities of the signal currently being inputted.	—	—
	LANGUAGE	Sets the language of the menus (Japanese, English, German, French, Swedish, Italian or Spanish).	English	No
	COLOR SYSTEM	Sets the VIDEO format (AUTO1, AUTO2, PAL, PAL-M, PAL-N, PAL60, SECAM, 4.43 NTSC or 3.58 NTSC).	AUTO1	No

*1 RGB/PC only.
*2 PLE: AUTO ORBITER: OFF INVERSE: OFF SCREEN WIPER: OFF
*3 AUDIO1: VIDEO1 AUDIO2: HD/DVD1 AUDIO3: RGB1

Picture Settings Menu

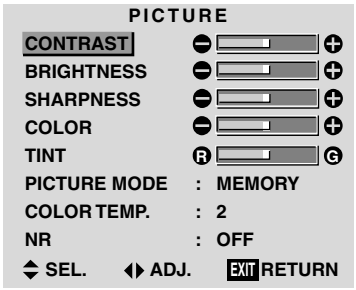
Adjusting the picture

The contrast, brightness, sharpness, color and tint can be adjusted as desired.

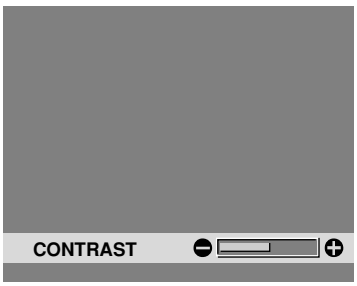
Example: Adjusting the contrast

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "PICTURE", then press the PROCEED button. The "PICTURE" screen appears.
2. Use the ▲ and ▼ buttons to select "CONTRAST".



3. Use the ◀ and ▶ buttons to adjust the contrast.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

4. *Once the adjustment is completed ...*

   Press the EXIT button to return to the main menu.

   To delete the main menu, press the EXIT button once more.

Note: *If "CAN NOT ADJUST" appears ...*
When trying to enter the PICTURE submenu, make sure PICTURE MODE is set to MEMORY.

Information

■ Picture adjustment screen

CONTRAST .... Changes the picture's contrast.
BRIGHTNESS . Changes the picture's brightness.
SHARPNESS .. Changes the picture's sharpness. Adjusts picture detail of VIDEO display.
COLOR ..... Changes the color density.
TINT ..... Changes the picture's tint. Adjust for natural colored skin, background, etc.

■ Adjusting the computer image

Only the contrast and brightness can be adjusted when a computer signal is connected.

■ Restoring the factory default settings

Select "RESET" under the "PICTURE MODE" settings.

Setting the picture mode according to the brightness of the room

There are four picture modes that can be used effectively according to the environment in which you are viewing the display.

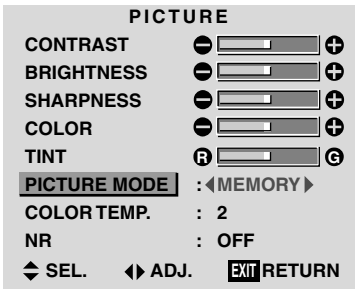
Example: Setting the "THEATER" mode

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "PICTURE", then press the PROCEED button.

   The "PICTURE" screen appears.

2. Use the ▲ and ▼ buttons to select "PICTURE MODE".

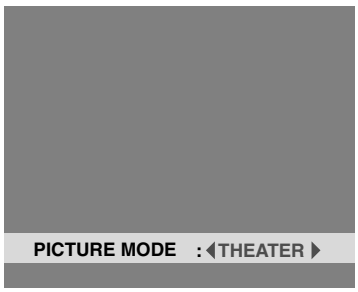


3. *To set to "THEATER" ...*

   Use the ◀ and ▶ buttons to select "THEATER".

   The mode switches as follows when the ◀ and ▶ buttons are pressed:

   → **MEMORY** ↔ **THEATER** ↔ **NORMAL** ↔ **RESET** ←



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

4. *Once the adjustment is completed ...*

   Press the EXIT button to return to the main menu. To delete the main menu, press the EXIT button once more.

Information

■ Types of picture modes

MEMORY ..... The last picture adjustments are stored here.

THEATER ..... Set this mode when watching video in a dark room.
This mode provides darker, finer pictures, like the screen in movie theaters.
CONTRAST = 80% for RESET mode
BRIGHTNESS = 95% for RESET mode

NORMAL ..... Set this mode when watching video in a bright room.
This mode provides dynamic pictures with distinct differences between light and dark sections.
CONTRAST = 96% for RESET mode

RESET ..... Use this to reset the picture to the factory default settings.

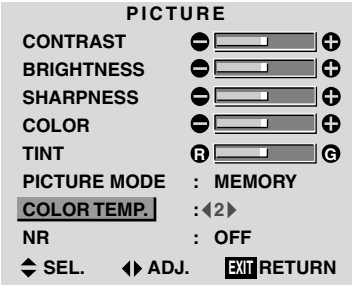
Setting the color temperature

Use this procedure to set color tone produced by the plasma display.

Example: Setting “1”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “PICTURE”, then press the PROCEED button.
   The “PICTURE” screen appears.
2. Use the ▲ and ▼ buttons to select “COLOR TEMP.”.

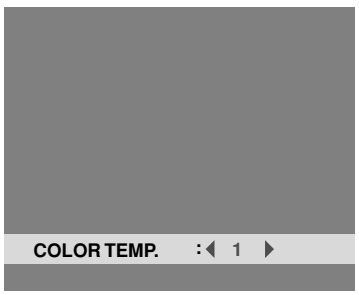


3. Use the ◀ and ▶ buttons to select “1”.

   The mode switches as follows when the ◀ and ▶ buttons are pressed:

   → 1 ↔ 2 ↔ 3 ↔ PRO ←

* See page E-21 to set “PRO”.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

4. *Once the setting is completed...*

   Press the EXIT button to return to the main menu.

   To delete the main menu, press the EXIT button once more.

Information

■ Setting the color temperature

1 ..... High (bluer)
2 ..... Middle (Standard)
3 ..... Low (redder)

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

Adjusting the color to the desired quality

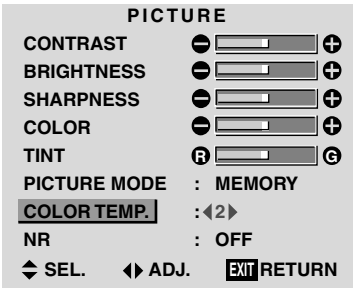
Use this procedure to adjust the white balance for bright pictures and dark pictures to achieve the desired color quality.

Example: Adjusting the "WHITE BALANCE"

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "PICTURE", then press the PROCEED button.
   The "PICTURE" screen appears.

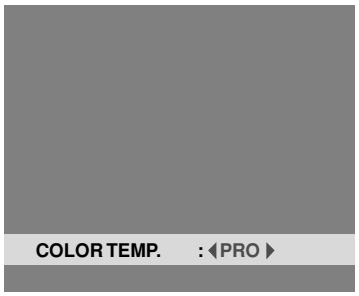
2. Use the ▲ and ▼ buttons to select "COLOR TEMP.".



3. Use the ◀ and ▶ buttons to select "PRO".

   The mode switches as follows when the ◀ and ▶ buttons are pressed:

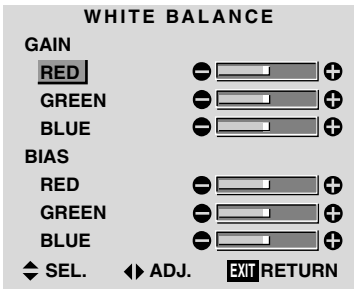
   ↱ 1 ↔ 2 ↔ 3 ↔ PRO ↰



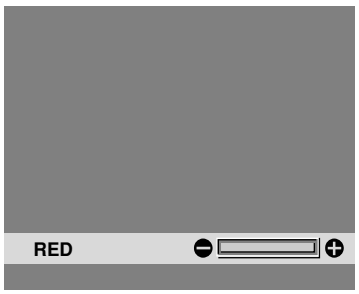
* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

4. Press the PROCEED button.
   The "WHITE BALANCE" screen appears.

5. Use the ▲ and ▼ buttons to select "RED-GAIN".



6. Adjust the white balance using the ◀ and ▶ buttons.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

7. *Once the adjustment is completed...*
   Press the EXIT button several times to return to the main menu. To delete the main menu, press the EXIT button once more.

Information

■ Adjusting the white balance

RGB-GAIN ..... White balance adjustment for signal level

RGB-BIAS ..... White balance adjustment for black level

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

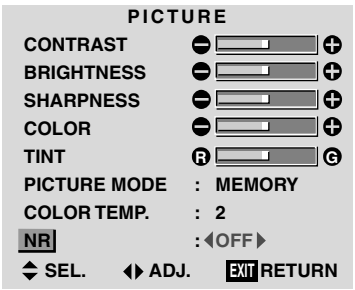
Reducing noise in the picture

Use these settings if the picture has noise due to poor reception or when playing video tapes on which the picture quality is poor.

Example: Setting “NR-3”

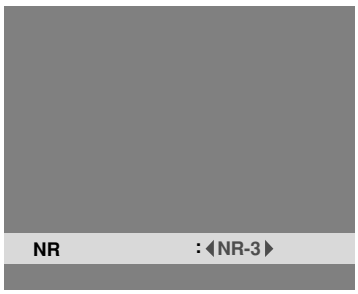
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “PICTURE”, then press the PROCEED button.
   The “PICTURE” screen appears.
2. Use the ▲ and ▼ buttons to select “NR”.



3. Use the ◀ and ▶ buttons to select “NR-3”.
   The mode switches as follows when the ◀ and ▶ buttons are pressed:

→ OFF ↔ NR-1 ↔ NR-2 ↔ NR-3 ←



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ NR

* “NR” stands for Noise Reduction.
* This function reduces noise in the picture.

■ Types of noise reduction

There are three types of noise reduction. Each has a different level of noise reduction.
The effect becomes stronger as the number increases (in the order NR-1 → NR-2 → NR-3).
OFF ..... Turns the noise reduction function off.

Sound Settings Menu

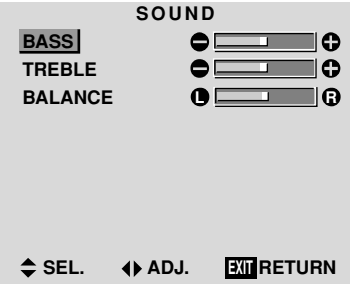
Adjusting the treble, bass and left/right balance

The treble, bass and left/right balance can be adjusted to suit your tastes.

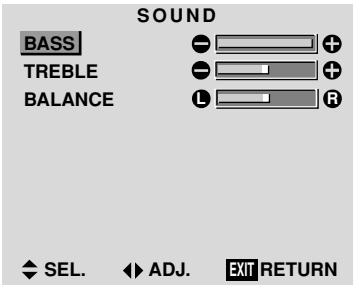
Example: Adjusting the bass

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "SOUND", then press the PROCEED button.
   The "SOUND" screen appears.
2. *To adjust the bass ...*
   Use the ▲ and ▼ buttons to select "BASS".



3. Adjust the bass using the ◀ and ▶ buttons.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

To continue adjusting the sound ...
Repeat from step 2.

4. *Once the adjustment is completed ...*
   Press the EXIT button to return to the main menu. To delete the main menu, press the EXIT button once more.

Note: *If "CAN NOT ADJUST" appears...*
Set "AUDIO INPUT" on the OPTION menu correctly.

Information

■ Sound settings menu

BASS ..... Changes the level of low frequency sound.
TREBLE ..... Changes the level of high frequency sound.
BALANCE ..... Changes the balance of the left and right channels.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

Screen Settings Menu

Adjusting the Position, Size, Fine Picture, Picture Adj

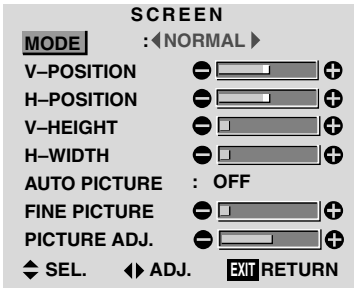
The position of the image can be adjusted and flickering of the image can be corrected.

Example: Adjusting the vertical position in the normal mode

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "SCREEN", then press the PROCEED button. The "SCREEN" menu appears.

   Default settings (when RGB/PC is selected)



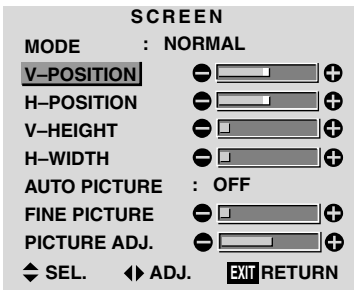
   * The settings on the SCREEN menu are not preset at the factory.

   To select a mode ...
   Use the ◀ and ▶ buttons to select a mode.
   The mode switches as follows when the ◀ and ▶ buttons are pressed:

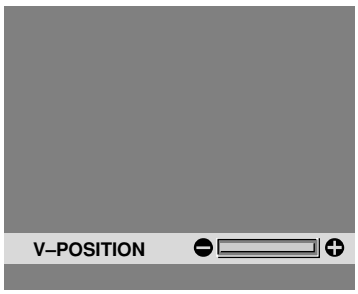
   → NORMAL ↔ FULL ←

   * The mode can also be switched by pressing the "WIDE" button on the remote control.

2. *To adjust the vertical position ...*
   Use the ▲ and ▼ buttons to select "V-POSITION".



3. Adjust using the ◀ and ▶ buttons.



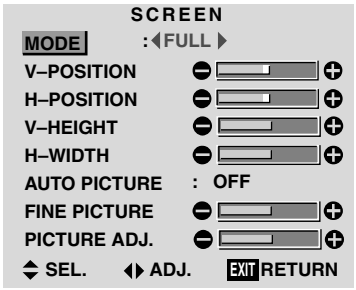
   * If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

   To continue making other computer image adjustments ...
   Repeat from step 2.

4. *Once all adjustments are completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ When "AUTO PICTURE" is "OFF"



When Auto Picture is off, the Fine Picture and the Picture ADJ items are displayed so that you can adjust them.

Information

■ Adjusting the Auto Picture

ON ..... The Picture ADJ and Fine Picture adjustments are made automatically.
OFF ..... The Picture ADJ and Fine Picture adjustments are made manually.

■ Adjusting the position of the image

V-POSITION ... Adjusts the vertical position of the image.
H-POSITION ... Adjusts the horizontal position of the image.
V-HEIGHT ..... Adjusts the vertical size of the image. (Except for STADIUM mode)
H-WIDTH ..... Adjusts the horizontal size of the image. (Except for STADIUM mode)
FINE PICTURE* .. Adjusts for flickering.
PICTURE ADJ* .... Adjusts for striped patterns on the image.

* The Picture ADJ and Fine Picture features are available only when the "Auto Picture" is off.
* The AUTO PICTURE, FINE PICTURE and PICTURE ADJ. are not available for VIDEO and HD/ DVD source.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults except for Auto Picture.

Function Settings Menu

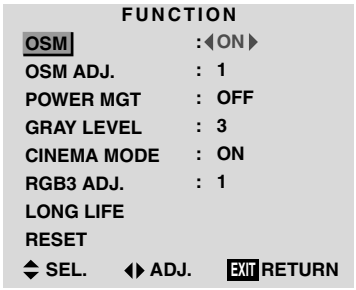
Setting the on-screen menu

When using the monitor for presentations, etc., the monitor can be set so that the input source, screen mode, etc., do not appear.

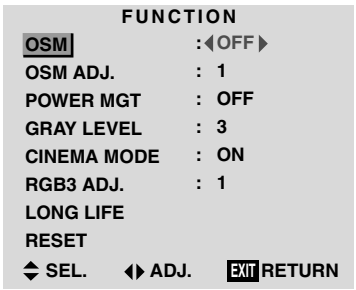
Example: Turning the on-screen menu mode off

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "OSM".



3. *To turn the on-screen menu mode off ...*
   Use the ◀ and ▶ buttons to select "OFF".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   ON ↔ OFF



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ OSM modes

ON ..... The on-screen menu appears.
OFF ..... The on-screen menu does not appear.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

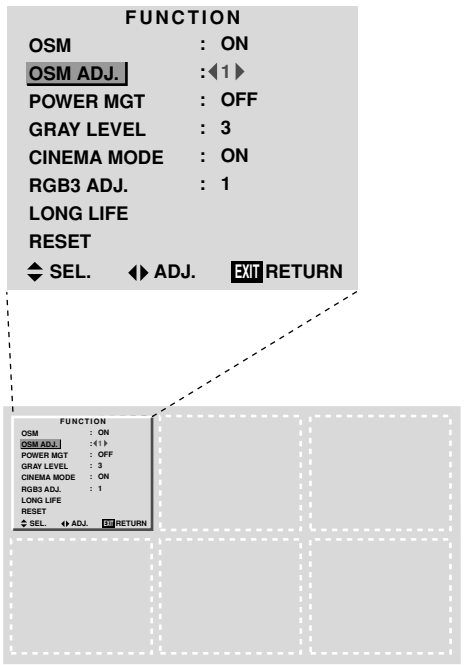
Adjusting the position of the menu display

Use these operations to adjust the position of the menus that appear on the screen.

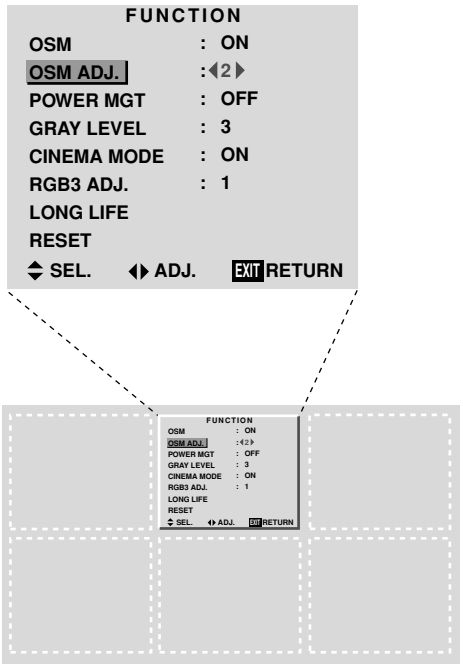
Example: Adjusting the position of the menu display

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" menu appears.
2. Use the ▲ and ▼ buttons to select "OSM ADJ."



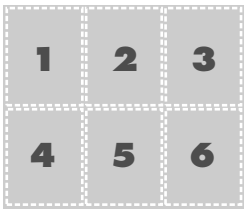
3. *To adjust the position...*
   Adjust using the ◀ and ▶ buttons.



4. *Once all adjustments are completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Adjusting the position of the menu display



The position can be set between 1 and 6.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

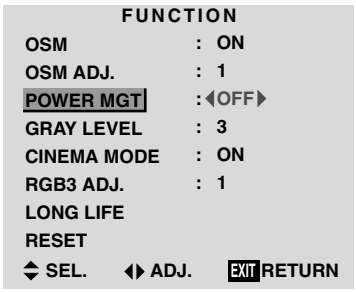
Setting the power management for computer images

This energy-saving (power management) function automatically reduces the monitor's power consumption if no operation is performed for a certain amount of time.

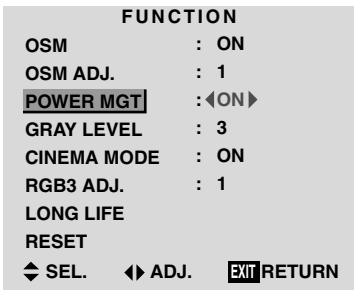
Example: Turning the power management function on

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "POWER MGT".



3. *To turn the power management function on ...*
   Use the ◀ and ▶ buttons to select "ON".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   ON ↔ OFF



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Power management function

* The power management function automatically reduces the monitor's power consumption if the computer's keyboard or mouse is not operated for a certain amount of time. This function can be used when using the monitor with a computer conforming to the VESA DPMS format.
* If the computer's power is not turned on or if the computer and selector tuner are not properly connected, the system is set to the off state.
* For instructions on using the computer's power management function, refer to the computer's operating instructions.

■ Power management settings

ON ..... In this mode the power management function is turned on.
OFF ..... In this mode the power management function is turned off.

■ Power management function and POWER/STANDBY indicator

The POWER/STANDBY indicator indicates the status of the power management function. See page E-28 for indicator status and description.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

POWER/STANDBY indicator

Power management mode	POWER/STANDBY indicator	Power management operating status	Description	Turning the picture back on
On	Green	Not activated.	Horizontal and vertical synchronizing signals are present from the computer.	Picture already on.
Standby	Orange	Activated.	No horizontal synchronizing signals are sent from the computer.	Operate the keyboard or mouse. The picture reappears immediately.
Suspend	Red	Activated.	No vertical synchronizing signals are sent from the computer.	Operate the keyboard or mouse. The picture reappears, but more time is required than from the standby mode.
Off	Red	Activated.	No horizontal and vertical synchronizing signals are sent from the computer.	Operate the keyboard or mouse. The picture reappears, but more time is required than from the standby mode or suspend mode.

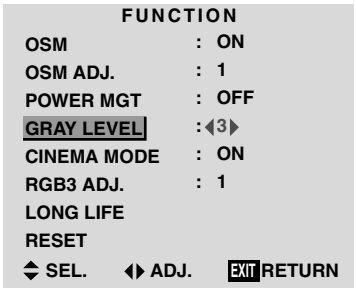
Setting the gray level for the sides of the screen

Use this procedure to set the gray level for the parts on the screen on which nothing is displayed when the screen is set to the 4:3 size.

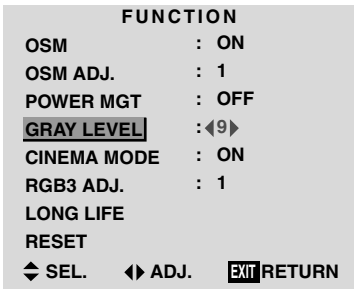
Example: Adjusting the "GRAY LEVEL"

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "GRAY LEVEL".



3. *To adjust the "GRAY LEVEL"...*
   Use the ◀ and ▶ buttons to adjust the GRAY LEVEL.



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ GRAY LEVEL

This adjusts the brightness of the black (the gray level) for the sides of the screen.
The standard is 0 (black). The level can be adjusted from 0 to 15. The factory setting is 3 (dark gray).

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

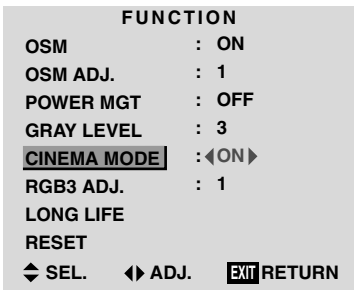
Setting the picture to suit the movie

The film image is automatically discriminated and projected in an image mode suited to the picture.
[NTSC, PAL, PAL60, 480I (60Hz), 525I (60Hz), 576I (50Hz), 625I (50Hz), 1035I (50Hz), 1080I (60Hz) only]

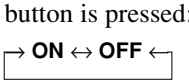
Example: Setting the "CINEMA MODE" to "OFF"

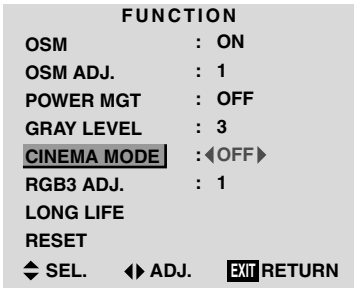
Press the PROCEED button on the remote control unit to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "CINEMA MODE".



3. *To set the CINEMA MODE to "OFF" ...*
   Use the ◀ and ▶ buttons to select "OFF".
   The mode switches as follows each time the ◀ or ▶ button is pressed:





4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ CINEMA MODE

ON ..... Automatic discrimination of the image and projection in cinema mode.
OFF ..... Cinema mode does not function.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

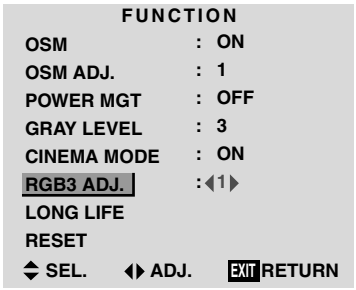
Setting RGB3 ADJ.

When the picture input from the RGB3 input terminal is distorted, select the most appropriate setting from among "1", "2", and "3".

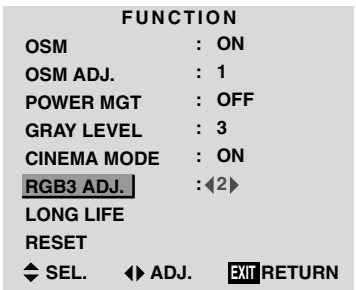
Example: Setting "2"

Press the PROCEED button on the remote control to display MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "RGB3 ADJ.".



3. *To select "2"...*
   Use the ◀ and ▶ buttons to select "2".
   The mode switches as follows each time the ◀ or ▶ buton is pressed:
   → **1** ↔ **2** ↔ **3** ←



4. *Once the setting is completed...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ When you adjust the RGB3 ADJ.

The position of the menu display will change. In such a case, be sure to adjust the position.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

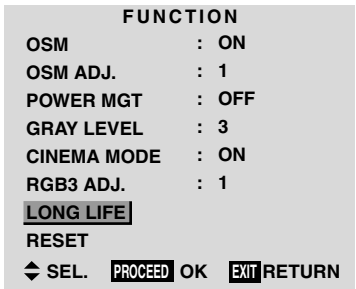
Reducing burn-in of the screen

The brightness of the screen, the position of the picture, positive/negative mode and screen wiper are adjusted to reduce burn-in of the screen.

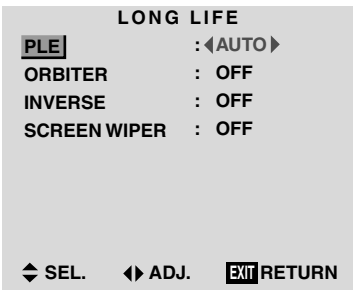
Example: Setting "PLE" to "LOCK"

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then proceed as follows.

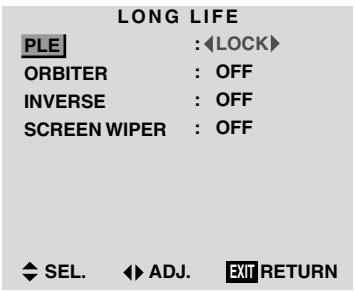
1. Use the ▲ and ▼ buttons to select "FUNCTION", then press the PROCEED button.
   The "FUNCTION" screen appears.
2. Use the ▲ and ▼ buttons to select "LONG LIFE", then press the PROCEED button.



   The "LONG LIFE" screen appears.
3. Use the ▲ and ▼ buttons to select "PLE".



4. Use the ◀ and ▶ buttons to select "LOCK".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   AUTO ↔ LOCK



5. *Once the setting is completed...*
   Press the EXIT button to return to the FUNCTION menu.
   To exit the main menu, press the EXIT button twice.

Information

■ PLE

AUTO ..... The brightness of the screen is adjusted automatically to suit the picture quality.
LOCK ..... The brightness level is set to minimum.

■ ORBITER

OFF ..... Orbiter mode does not function.
ON ..... The picture moves around the screen intermittently.

■ INVERSE

OFF ..... Inverse mode does not function.
ON ..... The picture is displayed alternately between positive image and negative image.
You can set the time by pressing the PROCEED button while "ON" is set.
WT ..... The entire screen turns white.
You can set the time by pressing the PROCEED button while "ON" is set.

■ SCREEN WIPER

OFF ..... Screen wiper mode does not function.
ON ..... Repeatedly moves the white vertical bar from the left end of the screen to the right end at a constant speed.
You can set the time by pressing the PROCEED button while "ON" is set.

■ Restoring the factory default settings

Select "RESET" from the function menu. Note that this also restores other settings to the factory defaults.

* Only the PLE and ORBITER can be adjusted when a RGB signal is connected.

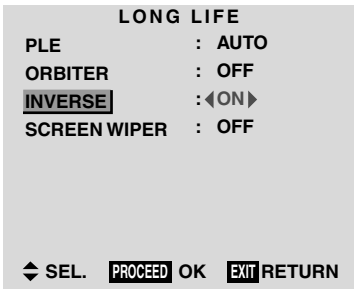
Setting the time for "INVERSE"

Set the "INVERSE" or "WHITE" display time and the "WAITING TIME".

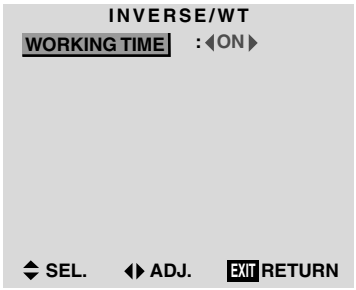
Example: Setting so that the INVERSE mode starts in 30 minutes and proceeds for one and a half hours.

Perform Steps 1-2 on Page E-30, then

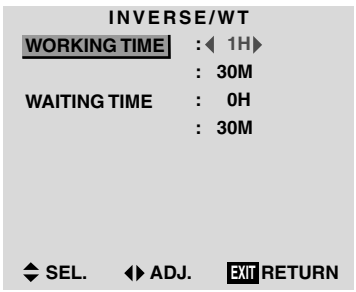
3. Use the ▲ and ▼ buttons to select "INVERSE", then use the ◀ and ▶ buttons to select "ON".



4. Press the PROCEED button.
   The "INVERSE/WT" screen appears.



5. Adjust the time using the ◀ and ▶ buttons and the ▲ and ▼ buttons.
   The mode switches as follows each time the ◀ or ▶ button is pressed.



The 1st line of the "WORKING TIME":

→ **ON or 0H ↔ 1H ↔ 2H ↔ 3H ↔ ... ↔ 12H** ←

* The "WORKING TIME" (minutes) and "WAITING TIME" cannot be set when the "WORKING TIME" is "ON".

The 2nd line of the “WORKING TIME”:

→ 0M ↔ 3M ↔ 6M ↔ 9M ↔ ... ↔ 57M ←

The 1st line of the “WAITING TIME”:

→ 0H ↔1H ↔ 2H ↔ 3H ↔ ... ↔ 12H ←

The 2nd line of the “WAITING TIME”:

→ 0M ↔ 3M ↔ 6M ↔ 9M ↔ ... ↔ 57M ←

6. *Once the setting is completed...*
   Press the EXIT button several times to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Setting the time

WORKING TIME

Set the length of time the “INVERSE/WT” mode lasts. When the WORKING TIME is set to “ON”, the “INVERSE/WT” mode stays in the on state.

WAITING TIME

Set the length of time until the “INVERSE/WT” mode starts.

* The “WORKING TIME” and “WAITING TIME” can be set for up to 12 hours and 45 minutes in units of 3 minutes.

■ To select “ON” for the “WORKING TIME”...

Set the hours of the WORKING TIME to 0H and the minutes to 0M. “ON” will be displayed.

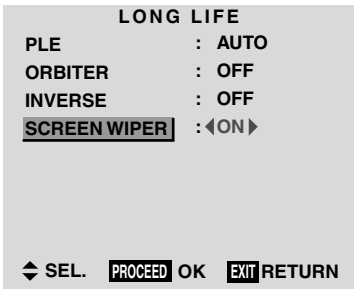
Setting the time for “SCREEN WIPER”

Set the “SCREEN WIPER” operation time, “WAITING TIME”, and “SPEED”.

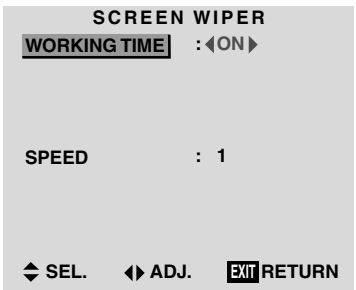
Example: Setting so that the SCREEN WIPER mode starts in 30 minutes and proceeds for one and a half hours.

Perform Steps 1-2 on Page E-30, then:

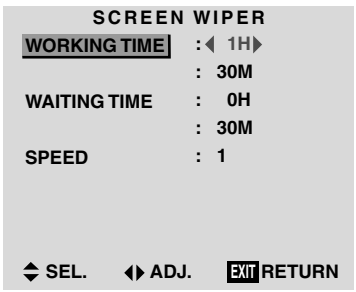
3. Use the ▲ and ▼ buttons to select “SCREEN WIPER”, then use the ◀ and ▶ buttons to select “ON”.



4. Press the PROCEED button.
   The “SCREEN WIPER” screen appears.



5. Adjust the time and speed using the ◀ and ▶ buttons and the ▲ and ▼ buttons.
   The mode switches as follows each time the ◀ and ▶ button is pressed.



The 1st line of the “WORKING TIME”:

→ ON or 0H ↔ 1H ↔ 2H ↔ 3H ↔ ... ↔ 12H ←

* The “WORKING TIME” (minutes) and “WAITING TIME” cannot be set when the “WORKING TIME” is “ON”.

The 2nd line of the “WORKING TIME”:

→ 0M ↔ 3M ↔ 6M ↔ 9M ↔ ... ↔ 57M←

The 1st line of the “WAITING TIME”:

→ 0H ↔1H ↔ 2H ↔ 3H ↔ ... ↔ 12H←

The 2nd line of the “WAITING TIME”:

→ 0M ↔ 3M ↔ 6M ↔ 9M ↔ ... ↔ 57M←

“SPEED”:

→ 1↔ 2 ↔ 3 ↔ 4 ↔ 5←

6. *Once the setting is completed...*
   Press the EXIT button several times to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Setting the time

WORKING TIME

Set the length of time the “SCREEN WIPER” mode lasts.
When the WORKING TIME is set to “ON”, the “SCREEN WIPER” mode stays in the state.

WAITING TIME

Set the length of time until the “SCREEN WIPER” mode starts.

SPEED

Set the moving speed for the “SCREEN WIPER”. The speed decreases as the number increases.

* The “WORKING TIME” and “WAITING TIME” can be set for up to 12 hours and 45 minutes in units of 3 minutes.

■ To select “ON” for “WORKING TIME”...

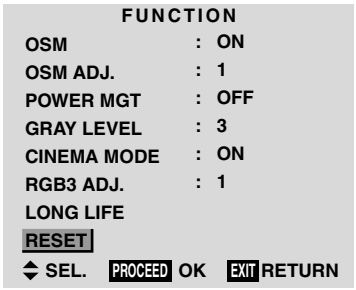
Set the hours of the “WORKING TIME” to 0H and the minutes to 0M. “ON” will be displayed.

Resetting to the default values

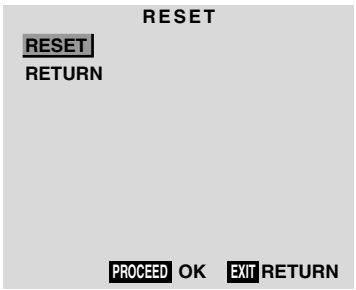
Use these operations to restore all the picture adjustments, audio settings, to the factory default values.
Refer to page E-17 for items to be reset.

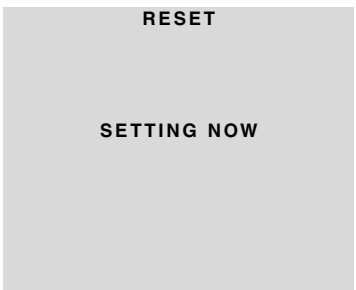
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “FUNCTION”, then press the PROCEED button.
   The “FUNCTION” screen appears.
2. Use the ▲ and ▼ buttons to select “RESET”, then press the PROCEED button.



   The “RESET” screen appears.
3. Use the ▲ and ▼ buttons to select “RESET”, then press the PROCEED button.





   When the “SETTING NOW” screen disappears, the screen will be restored to the previous “RESET” mode, then all the settings are restored to the default values.
4. *Once the setting is completed ...*
   Press the EXIT button.
   To delete the main menu, press the EXIT button once more.

Options Settings Menu

Setting the allocation of the audio connectors

Setting the AUDIO 1, 2, and 3 connectors to the desired input.

Example: Setting “AUDIO 1” to “VIDEO 2”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “OPTIONS”, then press the PROCEED button.
   The “OPTIONS” screen appears.
2. Use the ▲ and ▼ buttons to select “AUDIO 1”.

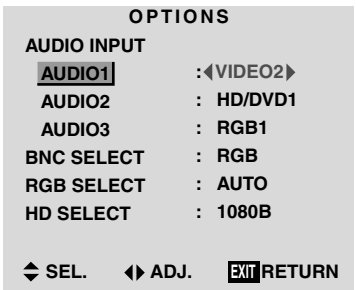
3. *To set the AUDIO1 to “VIDEO2”...*
   Use the ◀ and ▶ buttons to select “VIDEO2”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   The available sources depend on the setting of “BNC SELECT”.

RGB: → VIDEO1 ↔ VIDEO2 ↔ HD/DVD/DTV ←
→ RGB/PC3 ↔ RGB/PC2 ↔ RGB/PC1 ←

COMP.: → VIDEO1 ↔ VIDEO2 ↔ HD1/DVD1/DTV1 ←
→ RGB/PC3 ↔ RGB/PC1 ↔ HD2/DVD2/DTV2 ←

VIDEO: → VIDEO1 ↔ VIDEO2 ↔ VIDEO3 ←
→ RGB/PC3 ↔ RGB/PC1 ↔ HD/DVD/DTV ←

SCART: → VIDEO1 ↔ VIDEO2 ↔ HD1/DVD1/DTV1 ←
→ RGB/PC3 ↔ RGB/PC1 ↔ DVD2 ←



4. *Once the setting is completed...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ AUDIO INPUT

A single audio input cannot be selected as the audio channel for more than one input terminal.

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

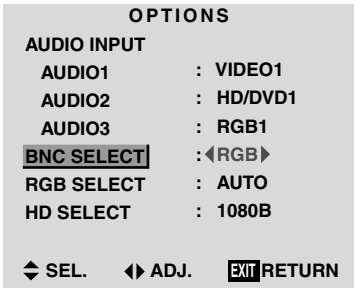
Setting the BNC connectors

Select whether to set the input of the 5 BNC connectors to RGB, component, video or SCART.

Example: Set the BNC SELECT mode to “COMP.”

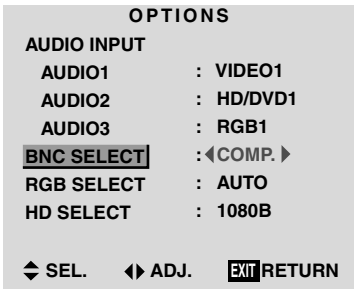
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “OPTIONS”, then press the PROCEED button.
   The “OPTIONS” screen appears.
2. Use the ▲ and ▼ buttons to select “BNC SELECT”.



3. *To set the BNC SELECT mode to “COMP.”...*
   Use the ◀ and ▶ buttons to select “COMP.”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   → RGB ↔ COMP. ↔ VIDEO ↔ SCART ←



4. *Once the setting is completed...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ BNC SELECT

RGB ..... Use the 5BNC terminal for RGB input.

COMP. ..... Use the 3BNC terminal for component input.

VIDEO ..... Use the G/Y/VIDEO 3 terminal for video input.

SCART ..... Use the 4BNC terminal for RGB with composite sync input. See page E-8.

■ Restoring the factory default settings

Select “RESET” under the function menu. Note that this also restores other settings to the factory defaults.

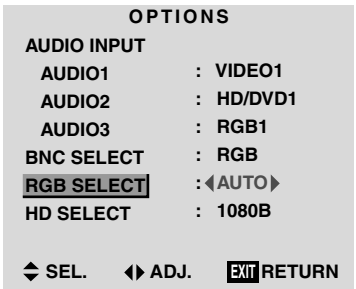
Setting a computer image to the correct RGB select screen

With the computer image, select the RGB Select mode for a moving image such as (video) mode, wide mode or digital broadcast.

Example: Setting the “RGB SELECT” mode to “MOTION ”

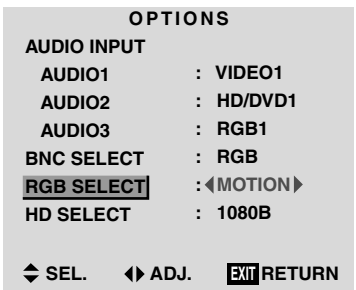
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “OPTIONS”, then press the PROCEED button.
   The “OPTIONS” screen appears.
2. Use the ▲ and ▼ buttons to select “RGB SELECT”.



3. *To set the RGB select mode to “MOTION” ...*
   Use the ◀ and ▶ buttons to select “MOTION”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   → AUTO ↔ STILL ↔ MOTION ↔ WIDE1 ↔ WIDE2 ↔ DTV ←



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ RGB SELECT modes

One of these 6 modes must be selected in order to display the following signals correctly.

AUTO ..... Select the suitable mode for the specifications of input signals as listed in the table "Computer input signals supported by this system" on page E-53.

STILL ..... To display VESA standard signals. (Use this mode for a still image from a computer.)

MOTION ..... The video signal (from a scan converter) will be converted to RGB signals to make the picture more easily viewable. (Use this mode for a motion image from a computer.)

WIDE1 ..... When an 852 dot × 480 line signal with a horizontal frequency of 31.7kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE1.

WIDE2 ..... When an 848 dot × 480 line signal with a horizontal frequency of 31.0 kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE2.

DTV ..... Set this mode when watching digital broadcasting (480P).

See page E-53 for the details of the above settings.

■ Restoring the factory default settings

Select "RESET" under the function menu. Note that this also restores other settings to the factory defaults.

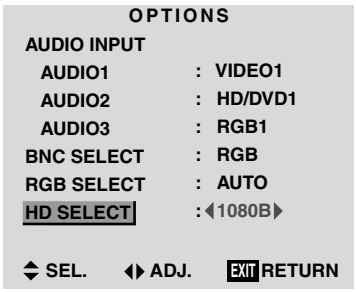
Setting high definition images to the suitable screen size

Use this procedure to set whether the number of vertical lines of the input high definition image is 1035 or 1080.

Example: Setting the "1080B" mode to "1035I"

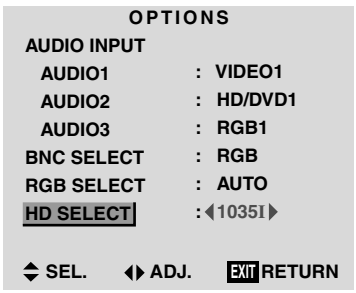
Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "OPTIONS", then press the PROCEED button.
   The "OPTIONS" screen appears.
2. Use the ▲ and ▼ buttons to select "HD SELECT".



3. *To set the HD SELECT mode to "1035I" ...*
   Use the ◀ and ▶ buttons to select "1035I".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   →**1080B** ↔ **1035I** ↔ **1080A** ←



4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ HD SELECT modes

These 3 modes are not displayed in correct image automatically.

1080B ..... Standard digital broadcasts

1035I ..... Japanese "High Vision" signal format

1080A ..... Special Digital broadcasts (for example : DTC100)

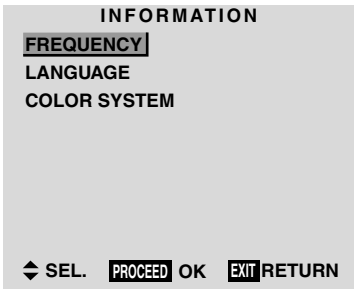
Information Menu

Checking the frequencies, polarities of input signals, and resolution

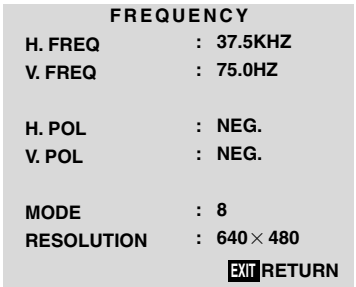
Use this function to check the frequencies and polarities of the signals currently being input from a computer, etc.

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "INFORMATION", then press the PROCEED button.
   The "INFORMATION" screen appears.
2. Use the ▲ and ▼ buttons to select "FREQUENCY", then press the PROCEED button.



3. The frequency is displayed.



* Press the EXIT button to return to the previous screen.

4. *Once you have checked the frequency ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

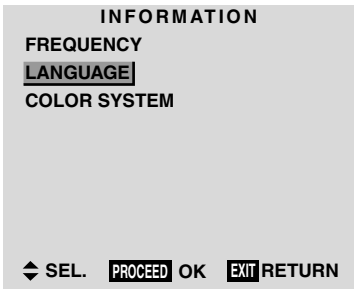
Setting the language for the menus

The menu display can be set to one of seven languages: Japanese, English, German, French, Swedish, Italian or Spanish.

Example: Setting the menu display to "DEUTSCH"

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select "INFORMATION", then press the PROCEED button. The "INFORMATION" screen appears.
2. Use the ▲ and ▼ buttons to select "LANGUAGE", then press the PROCEED button.



   The "LANGUAGE" screen appears.

3. *To select " DEUTSCH " ...*
   Use the ◀ and ▶ buttons to select " DEUTSCH ".
   The mode switches as follows when the ◀ and ▶ buttons are pressed:

ENGLISH ↔ DEUTSCH ↔ FRANÇAIS ↔
日本語 ↔ SVENSKA ↔ ITALIANO ↔ ESPAÑOL

4. Press the PROCEED button.
   The display language is switched to Deutsch.
5. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu.
   To delete the main menu, press the EXIT button once more.

Information

■ Language settings

ENGLISH ..... English
DEUTSCH ..... German
FRANÇAIS ..... French
ESPAÑOL ..... Spanish
ITALIANO ..... Italian
SVENSKA ..... Swedish
日本語 ..... Japanese

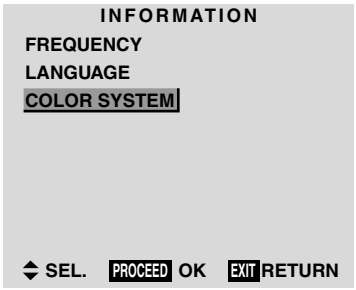
Setting the video signal format

Use these operations to set the video signal format.

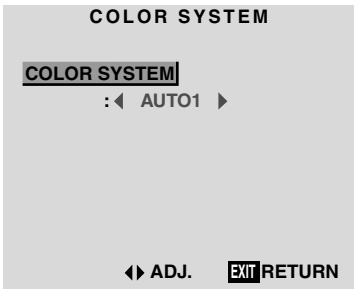
Example: Setting the video signal format to “3.58 NTSC”

Press the PROCEED button on the remote control to display the MAIN MENU on the screen, then...

1. Use the ▲ and ▼ buttons to select “INFORMATION”, then press the PROCEED button.
   The “INFORMATION” screen appears.
2. Use the ▲ and ▼ buttons to select “COLOR SYSTEM”, then press the PROCEED button.



The “COLOR SYSTEM” screen appears.



3. *To select “3.58 NTSC” ...*
   Use the ◀ and ▶ buttons to select “3.58 NTSC”.
   The mode switches as follows when the ◀ and ▶ buttons are pressed:

   → **AUTO1** ↔ **AUTO2** ↔ **3.58NTSC** ↔ **4.43NTSC** ←
   → **SECAM** ↔ **PAL-M** ↔ **PAL-N** ↔ **PAL60** ↔ **PAL** ←

4. *Once the setting is completed ...*
   Press the EXIT button to return to the main menu. To delete the main menu, press the EXIT button once more.

   The color system is set to “3.58 NTSC”.

Information

■ Video signal formats

Different countries use different formats for video signals. Set to the format used in your current country.

AUTO1/2 ..... The video signals are automatically detected and the format is set accordingly.
AUTO1: 3.58NTSC, 4.43NTSC, PAL, SECAM, PAL60
AUTO2: PAL-M, PAL-N, 3.58NTSC

PAL (B, G) ..... This is the standard format used mainly in the United Kingdom and Germany.

SECAM ..... This is the standard format used mainly in France and Russia.

4.43 NTSC, PAL60 ..... This format is used for videos in countries using PAL and SECAM video signals.

3.58 NTSC ..... This is the standard format used mainly in Japan and the United States.

PAL-M ..... This is the standard format used mainly in Brazil.

PAL-N ..... This is the standard format used mainly in Argentina.

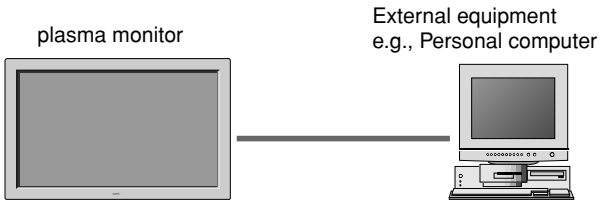
External Control

Application

These specifications cover the communications control of the plasma monitor by external equipment.

Connections

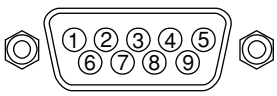
Connections are made as described below.



1) Connector on the plasma monitor side: EXTERNAL CONTROL connector.

Type of connector: D-Sub 9-pin male

No.	Pin Name
1	No Connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection



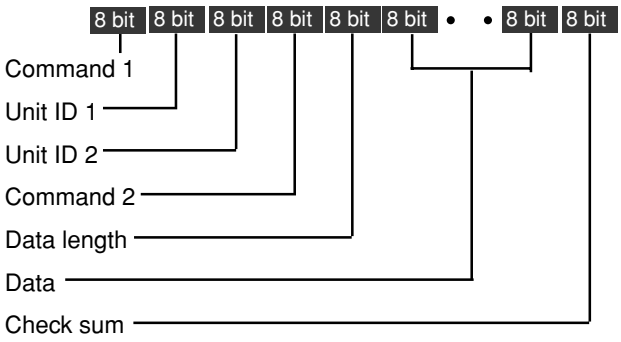
2) Connector on the external equipment side: Serial port (RS-232C) connector.
See the specifications of the equipment that is to be connected for the type of connector and the pin assignment.

3) Wiring
Use a crossed (reverse) cable.
Wire the cable so that each pair of data lines cross between the two devices. These data line pairs are RXD (Receive data) and TXD (Transmit data), DTR (DTE side ready) and DSR (DCE side ready), and RTS (Ready to send) and CTS (Clear to send).

Communication Parameters

(1) Communication system	Asynchronous
(2) Interface	RS-232C
(3) Baud rate	9600 bps
(4) Data length	8 bits
(5) Parity	Odd
(6) Stop bit	1 bit
(7) Communication code	Hex

Communication Format



Command 1

Command 1, along with command 2, is a number used to distinguish each command.
In the case of ACK, when the lower order 4 bits is FH (as in 3FH and 7FH), this indicates that the commands and data of the supported equipment have been received. When the lower order 4 bits is BH (as in 3BH and 7BH), this indicates that unsupported commands and data have been received.

Unit ID 1 and Unit ID 2

Unit ID 1 and unit ID 2 are numbers used to identify the equipment that is to be connected.
60H is used for the plasma monitor and 80H is used for external control equipment such as a personal computer.

1) Unit ID 1: Indicates the equipment sending the signal

2) Unit ID 2: Indicates the equipment receiving the signal

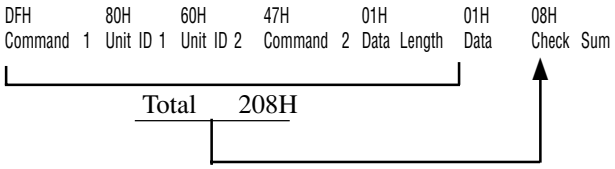
Command 2

Command 2, along with command 1, is a number used to distinguish each command.

Check Sum (CKS), Error Processing, and ACK

1) The check sum described below and RS-232C odd parity are used together for a check of the received data. The check sum is the lower order 8 bits of one frame of sent or received data comprising the sum total of Command 1, Unit ID 1 and 2, Command 2, Data Length, and Data.

Check Sum Example



2) Error Processing

- When the communication interval is vacant for more than 4 ms, thereafter a received Command 1 will be recognized. If, at this time, meaningful data cannot be recognized, that data will not be recognized (as valid data).
- An ACK will not be returned unless the receive data error, the check sum error, and the receive data are all taken in.

Command Reference List

	CMD1	CMD2	LEN
01. Power ON	9FH	4EH	00H
02. Power OFF	9FH	4FH	00H
03. Input Switch Change	DFH	47H	01H
04. VOLUME Gain Data	DFH	7FH	03H
05. AUDIO Mute On	9FH	3EH	00H
06. AUDIO Mute Off	9FH	3FH	00H
07. CONTRAST Gain Data	DFH	7FH	03H
08. BRIGHT Gain Data	DFH	7FH	03H
09. SHARPNESS Gain Data	DFH	7FH	03H
10. Color Gain Data	DFH	7FH	03H
11. TINT Gain Data	DFH	7FH	03H
12. PICTURE MODE Select	DFH	0AH	01H
13. COLOR TEMP SELECT	DFH	00H	01H
14. RED Gain Data	DFH	7FH	04H
15. GREEN Gain Data	DFH	7FH	04H
16. BLUE Gain Data	DFH	7FH	04H
17. NR MODE Set	DFH	C0H	01H
18. BASS Gain Data	DFH	7FH	03H
19. TREBLE Gain Data	DFH	7FH	03H
20. BALANCE Gain Data	DFH	7FH	03H
21. SCREEN MODE Select	DFH	51H	01H
22. V. POSITION Gain Data	DFH	7FH	03H
23. H. POSITION Gain Data	DFH	7FH	03H
24. V-HEIGHT Gain Data	DFH	7FH	03H
25. H-WIDTH Gain Data	DFH	7FH	03H
26. AUTO PICTURE Select	DFH	7FH	03H
27. PHASE Gain Data	DFH	7FH	03H
28. CLOCK Gain Data	DFH	7FH	03H
29. OSM Select	DFH	58H	01H
30. OSM ADJ. Gain Data	DFH	1AH	02H
31. POWER MGT Select	DFH	1AH	02H
32. GRAY LEVEL Set	DFH	C6H	01H
33. CINEMA MODE Set	DFH	C1H	01H
34. RGB3 ADJ. Select	DFH	1AH	02H
35. LONG LIFE Set	DFH	6BH	03H
36. INVERSE Set	DFH	C7H	03H
37. SCREEN WIPER Set	DFH	C8H	04H
38. RESET	1FH	54H	00H
39. Audio Select Set	DFH	70H	02H
40. BNC SELECT	DFH	8CH	01H
41. RGB Select	DFH	8BH	01H
42. HD Select	DFH	8AH	01H
43. LANGUAGE Select	DFH	5BH	01H
44. COLOR SYSTEM Select	DFH	5CH	01H
45. FREQUENCY Request	1FH	26H	00H
46. Input MODE Request	1FH	41H	00H
47. VIDEO ADJ Request	1FH	45H	00H
48. Audio Select Request	1FH	6FH	00H
49. Failure Mode Request	1FH	3FH	00H
50. MODEL NAME Request	1FH	17H	00H

01. Power ON

Function

The external control equipment switches on the power of the plasma monitor.

Transmission Data

9FH	80H	60H	4EH	00H	CKS

ACK

The plasma monitor returns the following ACK when the power is switched on.

3FH	60H	80H	4EH	00H	CKS

NOTE: Do not set the Power ON or Power OFF command continuously.

02. Power OFF

Function

The external control equipment switches off the power of the plasma monitor.

Transmission Data

9FH	80H	60H	4FH	00H	CKS

ACK

The plasma monitor returns the following ACK when the power is switched off.

3FH	60H	80H	4FH	00H	CKS

NOTE: Do not set the Power ON or Power OFF command continuously.

03. Input Switch Change

Function

The external control equipment switches the input of the plasma monitor.

Transmission Data

DFH	80H	60H	47H	01H	DATA00	CKS

DATA00: Input Select

- 01H: Video1
- 02H: Video2
- 03H: Video3
- 05H: HD (HD1 or DTV or DTV1)
- 06H: HD2 (DTV2)
- 07H: RGB1/PC1
- 08H: RGB2/PC2
- 0CH: RGB3/PC3

ACK

The plasma monitor returns the following ACK when the input is switched.

3FH	60H	80H	47H	00H	CKS

04. VOLUME Gain Data

Function

The external control equipment changes the VOLUME gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER SOUND Gain Flag 05H

DATA01: VOLUME Gain Flag 01H

DATA02: VOLUME Gain 00H: Step 0
|
0AH: Step 10 (Default)
|
2AH: Step 42

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER SOUND Gain Flag 05H

DATA01: VOLUME Gain Flag 01H

05. AUDIO Mute On

Function

The external control equipment switches on AUDIO Mute of the plasma monitor.

Transmission Data

9FH	80H	60H	3EH	00H	CKS

ACK

3FH	60H	80H	3EH	00H	CKS

06. AUDIO Mute Off

Function

The external control equipment switches off AUDIO Mute of the plasma monitor.

Transmission Data

9FH	80H	60H	3FH	00H	CKS

ACK

3FH	60H	80H	3FH	00H	CKS

07. CONTRAST Gain Data

Function

The external control equipment changes the CONTRAST gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: CONTRAST Gain Flag 07H

DATA02: CONTRAST Gain CCH : -52
|
FFH: -01
00H: 0
01H: +01
|
14H: +20

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: CONTRAST Gain Flag 07H

08. BRIGHT Gain Data

Function

The external control equipment changes the BRIGHT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: BRIGHT Gain Flag 08H

DATA02: BRIGHT Gain E0H: -32
|
FFH: -01
00H: 0
01H: +01
|
20H: +32

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: BRIGHT Gain Flag 08H

09. SHARPNESS Gain Data

Function

The external control equipment changes the SHARPNESS gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: SHARPNESS Gain Flag 06H

DATA02: SHARPNESS Gain F0H: -16
|
FFH: -01
00H: 0
01H: +01
|
10H:+16

Only when a RGB signal is connected

DATA02: SHARPNESS Gain 01H: 1
02H: 2
03H: 3
04H: 4

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H

DATA01: SHARPNESS Gain Flag 06H

10. COLOR Gain Data

Function

The external control equipment changes the COLOR gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: COLOR Gain Flag 04H
DATA02: COLOR Gain E0H: -32
* COLOR Gain is from -22 (EAH) to +22 (16H) only during video.
FFH: -01
00H: 0
01H: +01
20H: +32

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: COLOR Gain Flag 04H

11.TINT Gain Data

Function

The external control equipment changes the TINT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: TINT Gain Flag 05H
DATA02: TINT Gain E0H: -32
* TINT Gain is from -22 (EAH) to +22 (16H) only during video.
FFH: -01
00H: 0
01H: +01
20H: +32

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: TINT Gain Flag 05H

12. PICTURE MODE Select

Function

The external control equipment sets the picture mode of the plasma monitor.

Transmission Data

DFH	80H	60H	0AH	01H	DATA00	CKS

DATA00: 01H: MEMORY
02H: THEATER
03H: NORMAL
04H: RESET

ACK

7FH	60H	80H	0AH	01H	DATA00	CKS

DATA00: 01H: MEMORY
02H: THEATER
03H: NORMAL
04H: RESET

13. COLOR TEMP SELECT

Function

The external control equipment changes the COLOR TEMP of the plasma monitor.

Transmission Data

DFH	80H	60H	00H	01H	DATA00	CKS

DATA00: 00H: 1
01H: 2
02H: 3
03H: PRO

ACK

7FH	60H	80H	00H	01H	DATA00	CKS

DATA00: 00H: 1
01H: 2
02H: 3
03H: PRO

NOTE: Set so that at the selection of 1, 2, or 3 of COLOR TEMP change of the following R/G/B GAIN data cannot be accepted.

14. RED Gain Data

Function

The external control equipment changes the RED Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: RED Gain Flag 01H
DATA02: RED Gain 1 (Bias) D8H: -40
FFH: -1
00H: 0
IEH: +30
DATA03: RED Gain 2 (Drive) D8H: -40
FFH: -1
00H: 0
IEH: +30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 01H
DATA01: RED Gain Flag 01H

15. GREEN Gain Data

Function

The external control equipment changes the GREEN Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00: USER PICTURE Gain Flag — 01H
DATA01: GREEN Gain Flag — 02H
DATA02: GREEN Gain 1 (Bias) — D8H: -40 … FFH: -1 … 00H: 0 … IEH: +30
DATA03: GREEN Gain2 (Drive) — D8H: -40 … FFH: -1 … 00H: 0 … IEH: +30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag — 01H
DATA01: GREEN Gain Flag — 02H

16. BLUE Gain Data

Function

The external control equipment changes the BLUE Gain Data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	04H	DATA00 to DATA03	CKS

DATA00: USER PICTURE Gain Flag — 01H
DATA01: BLUE Gain Flag — 03H
DATA02: BLUE Gain1(Bias) — D8H:-40 … FFH:-1 … 00H: 0 … IEH: +30
DATA03: BLUE Gain2(Drive) — D8H: -40 … FFH:-1 … 00H: 0 … IEH:+30

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag — 01H
DATA01: BLUE Gain Flag — 03H

17. NR MODE Set

Function

The external control equipment sets the NR (Noise Reduction) mode of the plasma monitor.

Transmission Data

DFH	80H	60H	C0H	01H	DATA00	CKS

DATA00: 01H: NR OFF
02H: NR-1
03H: NR-2
04H: NR-3

ACK

7FH	60H	80H	C0H	01H	DATA00	CKS

DATA00: 01H: NR OFF
02H: NR-1
03H: NR-2
04H: NR-3

18. BASS Gain Data

Function

The external control equipment changes the BASS gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag — 05H
DATA01: BASS Gain Flag — 03H
DATA02: BASS Gain — F3H: -13 … FFH: -01 … 00H: 0 … 01H: +01 … 0DH: +13

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag — 05H
DATA01: BASS Gain Flag — 03H

19. TREBLE Gain Data

Function

The external control equipment changes the TREBLE gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag — 05H
DATA01: TREBLE Gain Flag — 04H
DATA02: TREBLE Gain — F3H: -13 … FFH: -01 … 00H: 0 … 01H: +01 … 0DH: +13

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag — 05H
DATA01: TREBLE Gain Flag — 04H

20. BALANCE Gain Data

Function

The external control equipment changes the BALANCE gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 05H
DATA01: BALANCE Gain Flag 02H
DATA02: BALANCE Gain EAH: -22
FFH: -01
00H: 0
01H: +01
16H: +22

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 05H
DATA01: BALANCE Gain Flag 02H

21. SCREEN MODE Select

Function

The external control equipment switches the screen mode of the plasma monitor.

Transmission Data

DFH	80H	60H	51H	01H	DATA00	CKS

DATA00: 02H: STADIUM
03H: ZOOM
04H: NORMAL
05H: FULL

ACK

7FH	60H	80H	51H	01H	DATA00	CKS

DATA00: 02H: STADIUM
03H: ZOOM
04H: NORMAL
05H: FULL

22. V. POSITION Gain Data

Function

The external control equipment changes the V. POSITION gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: V. POSITION Gain Flag 01H
DATA02: V. POSITION Gain C0H: -64
FFH: -01
00H: 0
01H: +01
40H: +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: V. POSITION Gain Flag 01H

23. H. POSITION Gain Data

Function

The external control equipment changes the H. POSITION gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: H. POSITION Gain Flag 02H
DATA02: H. POSITION Gain 80H: -128
FFH: -01
00H: 0
01H: +01
7FH: +127

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: H. POSITION Gain Flag 02H

24. V-HEIGHT Gain Data

Function

The external control equipment changes the V-HEIGHT gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: V-HEIGHT Gain Flag 07H
DATA02: V-HEIGHT Gain 00H: 0
40H: +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: V-HEIGHT Gain Flag 07H

25. H-WIDTH Gain Data

Function

The external control equipment changes the H-WIDTH gain data of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: H-WIDTH Gain Flag 08H
DATA02: H-WIDTH Gain 00H: 0
40H: +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: H-WIDTH Gain Flag 08H

26. AUTO PICTURE Select

Function

The external control equipment switches on or off the AUTO PICTURE of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: AUTO PICTURE Select Flag 09H
DATA02: 00H: ON
01H: OFF

ACK

7FH	60H	80H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: AUTO PICTURE Select Flag 09H
DATA02: 00H: ON
01H: OFF

27. PHASE Gain Data

Function

The external control equipment changes the PHASE gain data (Phase) of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: PHASE Gain Flag 03H
DATA02: PHASE Gain 00H: 0
|
2CH: +44

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: PHASE Gain Flag 03H

28. CLOCK Gain Data

Function

The external control equipment changes the CLOCK gain data (ratio of frequency division) of the plasma monitor.

Transmission Data

DFH	80H	60H	7FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: CLOCK Gain Flag 04H
DATA02: CLOCK Gain C0H: -64
|
FFH: -01
00H: 0
01H: +01
|
40H: +64

ACK

7FH	60H	80H	7FH	02H	DATA00	DATA01	CKS

DATA00: USER PICTURE Gain Flag 03H
DATA01: CLOCK Gain Flag 04H

29. OSM Select

Function

The external control equipment switches on or off the on-screen menu (OSM) of the plasma monitor.

Transmission Data

DFH	80H	60H	58H	01H	DATA00	CKS

DATA00: 01H: On-Screen menu On
02H: On-Screen menu Off

ACK

7FH	60H	80H	58H	01H	DATA00	CKS

DATA00: 01H: On-Screen menu On
02H: On-Screen menu Off

On-Screen menu On/Off is equivalent to the OSM menu item under the FUNCTION menu.

*Operation is as described in the table below.

Operation	On-Screen Menu (OSM)			
	Display of items and adjustments on the menu		Volume display, input display, and screen size display	
	When screen menu is ON	When screen menu is OFF	When screen menu is ON	When screen menu is OFF
Remote control operation	Yes	Yes	Yes	No
Personal computer control operation	No	No	Yes	No

30. OSM ADJ. Gain Data

Function

The external control equipment sets the position of the OSM menu of the plasma monitor.

Transmission Data

DFH	80H	60H	1AH	02H	DATA00	DATA01	CKS

DATA00: OSM ADJ. Gain Flag 02H
DATA01: 01H: 1
|
06H: 6

ACK

7FH	60H	80H	1AH	01H	DATA00	CKS

DATA00: OSM ADJ. Gain Flag 02H

31. POWER MGT Select

Function

The external control equipment switches on or off the POWER MANAGEMENT of the plasma monitor.

Transmission Data

DFH	80H	60H	1AH	02H	DATA00	DATA01	CKS

DATA00: POWER MGT Select 03H
DATA01: 01H: ON
02H: OFF

ACK

7FH	60H	80H	1AH	02H	DATA00	DATA01	CKS

DATA00: POWER MGT Select 03H
DATA01: 01H: ON
02H: OFF

32. GRAY LEVEL Set

Function

The external control equipment sets the GRAY LEVEL of the plasma monitor.

Transmission Data

DFH	80H	60H	C6H	01H	DATA00	CKS

DATA00: GRAY LEVEL 00H: 0
|
0FH: 15

ACK

7FH	60H	80H	C6H	01H	DATA00	CKS

DATA00: GRAY LEVEL 00H: 0
|
0FH: 15

33. CINEMA MODE Set

Function

The external control equipment switches on or off the CINEMA MODE of the plasma monitor.

Transmission Data

DFH	80H	60H	C1H	01H	DATA00	CKS

DATA00: CINEMA MODE Set 01H: ON
02H: OFF

ACK

7FH	60H	80H	C1H	01H	DATA00	CKS

DATA00: CINEMA MODE Set 01H: ON
02H: OFF

34. RGB3 ADJ. Select

Function

The external control equipment sets the RGB3 ADJUST of the plasma monitor.

Transmission Data

DFH	80H	60H	1AH	02H	DATA00	DATA01	CKS

DATA00: RGB3 ADJ. Select 06H
DATA01: 01H: 1
02H: 2
03H: 3

ACK

7FH	60H	80H	1AH	02H	DATA00	DATA01	CKS

DATA00: RGB3 ADJ. Select 06H
DATA01: 01H: 1
02H: 2
03H: 3

35. LONG LIFE Set

Function

The external control equipment sets the PLE, ORBITER, and INVERSE (inverse of image brightness) of the plasma monitor.

Transmission Data

DFH	80H	60H	6BH	03H	DATA00	DATA01	DATA02	CKS

DATA00: PLE 01H: AUTO
02H: LOCK
DATA01: INVERSE 01H: ON
02H: OFF
03H: WHITE
DATA02: ORBITER (PICTURE SHIFT) 01H: ON
02H: OFF

ACK

The plasma monitor returns the following ACK when setting the PLE, ORBITER, and INVERSE (inverse of image brightness):

3FH	60H	80H	6BH	00H	CKS

36. INVERSE Set

Function

The external control equipment sets the INVERSE (inverse of image brightness) and the WHITE of the plasma monitor.

Transmission Data

DFH	80H	60H	C7H	03H	DATA00	DATA01	DATA02	CKS

DATA00 : INVERSE/WHITE
- 00H: No operation
- 01H: ON(INVERSE)
- 02H: OFF
- 03H: WHITE

DATA01 : WORKING TIME
- 00H: ON
- 01H: 03M (minutes)
- 02H: 06M (minutes)
- |
- FFH: 12H (hours) and 45M (minutes)

DATA02 : WAITING TIME
- 01H: 03M (minutes)
- 02H: 06M (minutes)
- |
- FFH: 12H (hours) and 45M (minutes)

ACK

3FH	60H	80H	C7H	00H	CKS

NOTE: The WORKING TIME and the WAITING TIME can be set in units of 3 minutes.
Example: 03H=9 minutes
1EH=1 hour and 30 minutes

37. SCREEN WIPER Set

Function

The external control equipment sets the SCREEN WIPER of the plasma monitor.

Transmission Data

DFH	80H	60H	C8H	04H	DATA00 to	DATA03	CKS

DATA00 : SCREEN WIPER
- 00H: No operation
- 01H: ON
- 02H: OFF

DATA01 : WORKING TIME
- 00H: ON
- 01H: 03M (minutes)
- 02H: 06M (minutes)
- |
- FFH: 12H (hours) and 45M (minutes)

DATA02 : WAITING TIME
- 01H: 03M (minutes)
- 02H: 06M (minutes)
- |
- FFH: 12H (hours) and 45M (minutes)

DATA03 : SPEED
- 01H: 1
- |
- 05H: 5

ACK

3FH	60H	80H	C8H	00H	CKS

NOTE: The WORKING TIME and the WAITING TIME can be set in units of 3 minutes.
Example: 03H=9 minutes
1EH=1 hour and 30 minutes

38. RESET

Function

The external control equipment resets the user adjustment of the plasma monitor.

Transmission Data

1FH	80H	60H	54H	00H	CKS

ACK

3FH	60H	80H	54H	00H	CKS

39. Audio Select Set

Function

The external control equipment sets combinations of audio and video inputs for the plasma monitor.

Transmission Data

DFH	80H	60H	70H	02H	DATA00	DATA01	CKS

DATA00: AUDIO INPUT
- 01H: AUDIO 1
- 02H: AUDIO 2
- 03H: AUDIO 3

DATA01: VISUAL INPUT
- 01H: Video 1
- 02H: Video 2
- 03H: Video 3
- 05H:HD (HD1 or DTV or DTV1)
- 06H: HD2 (DTV2)
- 07H: RGB 1/ PC 1
- 08H: RGB 2/ PC 2
- 0CH: RGB 3/ PC 3

ACK

The plasma monitor returns the following ACK when the input is switched.

3FH	60H	80H	70H	00H	CKS

* The plasma monitor returns “Not Available” when selecting the video input same as the one set at one of the AUDIO 1 to 3.

Example:

The plasma monitor returns “Not Available” when selecting the VIDEO1 for AUDIO2 or VIDEO3 after VIDEO1 has been set to AUDIO1.

40. BNC SELECT

Function

The external control equipment sets the BNC SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8CH	01H	DATA00	CKS

DATA00 : BNC SELECT
- 01H: RGB
- 02H: Component
- 03H: Video
- 04H: SCART

ACK

The plasma monitor returns the following ACK when setting the BNC SELECT:

7FH	60H	80H	8CH	01H	DATA00	CKS

DATA00 : BNC SELECT
- 01H: RGB
- 02H: Component
- 03H: Video
- 04H: SCART

41. RGB Select

Function

The external control equipment sets the RGB SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8BH	01H	DATA00	CKS

DATA00:
- 01H: AUTO
- 02H: STILL
- 03H: MOTION
- 04H: WIDE1
- 05H: WIDE2
- 06H: DTV

ACK

7FH	60H	80H	8BH	01H	DATA00	CKS

DATA00:
- 01H: AUTO
- 02H: STILL
- 03H: MOTION
- 04H: WIDE1
- 05H: WIDE2
- 06H: DTV

42. HD Select

Function

The external control equipment sets the HD SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	8AH	01H	DATA00	CKS

DATA00:
- 01H: 1035I
- 02H: 1080A
- 03H: 1080B

ACK

7FH	60H	80H	8AH	01H	DATA00	CKS

DATA00:
- 01H: 1035I
- 02H: 1080A
- 03H: 1080B

43. LANGUAGE Select

Function

The external control equipment sets the LANGUAGE SELECT of the plasma monitor.

Transmission Data

DFH	80H	60H	5BH	01H	DATA00	CKS

DATA00:
- 01H: ENGLISH
- 02H: GERMAN
- 03H: FRENCH
- 04H: SPANISH
- 05H: ITALIAN
- 06H: SWEDISH
- 07H: JAPANESE

ACK

7FH	60H	80H	5BH	01H	DATA00	CKS

DATA00:
- 01H: ENGLISH
- 02H: GERMAN
- 03H: FRENCH
- 04H: SPANISH
- 05H: ITALIAN
- 06H: SWEDISH
- 07H: JAPANESE

44. COLOR SYSTEM Select

Function

The external control equipment sets the COLOR SYSTEM of the plasma monitor.

Transmission Data

DFH	80H	60H	5CH	01H	DATA00	CKS

DATA00:
- 01H: 3.58NTSC
- 02H: 4.43NTSC
- 03H: PAL
- 04H: SECAM
- 0AH: AUTO1
- 0BH: PAL60
- 0CH: AUTO2
- 0DH: PAL- M
- 0EH: PAL- N

ACK

7FH	60H	80H	5CH	01H	DATA00	CKS

DATA00:
- 01H: 3.58NTSC
- 02H: 4.43NTSC
- 03H: PAL
- 04H: SECAM
- 0AH: AUTO1
- 0BH: PAL60
- 0CH: AUTO2
- 0DH: PAL- M
- 0EH: PAL- N

45. FREQUENCY Request

Function

The external control equipment inquires the Horizontal frequency, Vertical frequency, Horizontal sync polarity, Vertical sync polarity, Mode, and Resolution of the plasma monitor.

Transmission Data

1FH	80H	60H	26H	00H	CKS

ACK

7FH	60H	80H	26H	0BH	DATA00 to	DATA10 CKS

Horizontal frequency

DATA00: Integer part
00H: 0 (No signal: 00H)
|
FFH: 256

DATA01: One decimal place
00H: 0 (No signal: 00H)
|
09H: 9

Vertical frequency

DATA02: Integer part
00H: 0 (No signal: 00H)
|
FFH: 256

DATA03: One decimal place
00H: 0 (No signal: 00H)
|
09H: 9

Horizontal sync polarity

DATA04: 00H: –
01H: Positive
02H: Negative

Vertical sync polarity

DATA05: 00H: –
01H: Positive
02H: Negative

MODE

DATA06:	00H:	No signal	–
	01H to 80H:	RGB signal	Identification number of PC mode
	81H:	Video signal	3.58NTSC
	82H:		4.43NTSC
	83H:		PAL
	84H:		PAL- M
	85H:		PAL- N
	86H:		PAL60
	87H:		SECAM
	88H:		B/W60
	89H:		B/W50
	A0H:	HD/DVD/DTV signal	480I
	A1H:		480P
	A2H:		576I
	A3H:		576P
	A4H:		720P
	A5H:		1035I
	A6H:		1080I

RESOLUTION

DATA07: Dots (Low-order byte)
00H: 0 (No signal: 00H)
|
FFH: 256

DATA08: Dots (High-order byte)
00H: 257 (No signal: 00H)
|
FFH

DATA09: Lines (Low-order byte)
00H: 0 (No signal: 00H)
|
FFH: 256

DATA10: Lines (High-order byte)
00H: 257 (No signal: 00H)
|
FFH

46. Input MODE Request

Function

The display returns the current input information by the external control equipment' s request.

Transmission Data

1FH	80H	60H	41H	00H	CKS

ACK

7FH	60H	80H	41H	01H	DATA00 CKS

DATA00: Input Select

01H: Video1	02H: Video2
03H: Video3	04H: HD (HD1 or DTV or DTV1)
05H: RGB1/PC1	06H: RGB2/PC2
0AH: DVD (DVD1)	0CH: HD2 (DTV2)
0DH: DVD2	0EH: RGB3/PC3

47. VIDEO ADJ Request

Function

The display returns the video adjustments information by the external control equipment's request.

Transmission Data

1FH	80H	60H	45H	00H	CKS

ACK

7FH	60H	80H	45H	0CH	DATA00 to DATA11	CKS

DATA00: RED Gain(Bias)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA01: GREEN Gain(Bias)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA02: BLUE Gain(Bias)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA03: COLOR Gain

E0H: -32
|
FFH: -01
00H: 0
01H: +01
|
20H: +32

* COLOR Gain is from -22 (EAH) to +22 (16H) only during video.

DATA04: TINT Gain

E0H: -32
|
FFH: -01
00H: 0
01H: +01
|
20H: +32

* TINT Gain is from -22 (EAH) to +22 (16H) only during video.

DATA05: SHARPNESS Gain

F0H: -16
|
FFH: -01
00H: 0
01H: +01
|
10H: +16

DATA06: CONTRAST Gain

CCH: -52
|
FFH: -01
00H: 0
01H: +01
|
14H: +20

DATA07: BRIGHT Gain

E0H: -32
|
FFH: -01
00H: 0
01H: +01
|
20H: +32

DATA08: RED Gain(Drive)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA09: GREEN Gain(Drive)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA10: BLUE Gain(Drive)

D8H: -40
|
FFH: -1
00H: 0
|
IEH: +30

DATA11: COLOR TEMP

00H: 1
01H: 2
02H: 3
03H: PRO

48. Audio Select Request

Function

The external control equipment inquires the current combinations of audio and video inputs for the plasma monitor.

Transmission Data

1FH	80H	60H	6FH	00H	CKS

ACK

The plasma monitor returns the following ACK:

7FH	60H	80H	6FH	03H	DATA00	DATA01	DATA02	CKS

DATA00: AUDIO 1
01H – 0CH: VISUAL INPUT DATA
DATA01: AUDIO 2
01H – 0CH: VISUAL INPUT DATA
DATA02: AUDIO 3
01H – 0CH: VISUAL INPUT DATA

VISUAL INPUT DATA
01H: Video 1
02H: Video 2
03H: Video 3
05H: HD (HD1 or DTV or DTV 1)
06H: HD2 (DTV2)
07H: RGB 1 /PC 1
08H: RGB 2 /PC 2
0CH: RGB 3 /PC 3

49. Failure Mode Request

Function

The external control equipment inquires the detection of failures of the plasma monitor.

Transmission Data

1FH	80H	60H	3FH	00H	CKS

ACK

The plasma monitor returns the following ACK:

7FH	60H	80H	3FH	02H	DATA00	DATA01	CKS

DATA00: FAILURE MODE 1
Bit 0 : PDP MODULE
0: Abnormal
1: Normal
Bit 1 : 1: fixed (backup)
Bit 2 : TEMPERATURE
0: Abnormal
1: Normal
Bit 3 : 1: fixed (backup)
Bit 4 : TEMPERATURE SENSOR
0: Abnormal
1: Normal
Bit 5 : 1: fixed (backup)
Bit 6 : 1: fixed (backup)
Bit 7 : 1: fixed (backup)
DATA01: FAILURE MODE 2
Bit 0–7 : 1: fixed (backup)

50. MODEL NAME Request

Function

The external control equipment inquires the product code of the plasma monitor.

Transmission Data

1FH	80H	60H	17H	00H	CKS

ACK

The plasma monitor returns the following ACK:

7FH	60H	80H	17H	0CH	DATA00 to	DATA11	CKS

DATA00 : 1st character of the product code
DATA01 : 2nd character of the product code
DATA11 : 12th character of the product code

NOTE:

Received data (Hex)	Corresponding character
00H	0
01H	1
08H	8
09H	9
10H	A
11H	B
12H	C
28H	Y
29H	Z
80H	- (Hyphen)
96H	(Blank)

If there are fewer than 12 characters in the product code, product code would be padded right with blanks.

Example: If the product code of your plasma monitor is “PX-42VM3G”, the returned codes would be as follows.

DATA00: 1FH
DATA01: 27H
DATA02: 80H
DATA03: 04H
DATA04: 02H
DATA05: 25H
DATA06: 1CH
DATA07: 03H
DATA08: 16H
DATA09: 96H
DATA10: 96H
DATA11: 96H

Table of Signals Supported

Supported resolution

- When the screen mode is NORMAL, each signal is converted to a 640 dots × 480 lines signal. (Except for *2, *4)
- When the screen mode is FULL, each signal is converted to a 853 dots × 480 lines signal. (Except for *3)

Computer input signals supported by this system

Model / Signal Type	Dots × lines	Vertical frequency (Hz)	Horizontal frequency (kHz)	Sync Polarity		Presence		Screen mode		RGB select*5	DVI
				Horizontal	Vertical	Horizontal	Vertical	NORMAL (4:3)	FULL (16:9)		
	640×400	70.1	31.5	NEG	NEG	YES	YES	YES*2*3	YES	– –	NO
*IBM PC/AT compatible computers	640×480	59.9	31.5	NEG	NEG	YES	YES	YES*3	YES	STILL	YES
		72.8	37.9	NEG	NEG	YES	YES	YES*3	YES	– –	YES
		75.0	37.5	NEG	NEG	YES	YES	YES*3	YES	STILL	YES
		85.0	43.3	NEG	NEG	YES	YES	YES*3	YES	– –	YES
		100.4	51.1	NEG	NEG	YES	YES	YES*3	YES	– –	YES
		120.4	61.3	NEG	NEG	YES	YES	YES*3	YES	– –	YES
	848×480	60.0	31.0	POS	POS	YES	YES	– –	YES*3	WIDE2	YES
	852×480*1	60.0	31.7	NEG	NEG	YES	YES	– –	YES*3	WIDE1	YES
	800×600	56.3	35.2	POS	POS	YES	YES	YES	YES	STILL	YES
		60.3	37.9	POS	POS	YES	YES	YES	YES	STILL	YES
		72.2	48.1	POS	POS	YES	YES	YES	YES	– –	YES
		75.0	46.9	POS	POS	YES	YES	YES	YES	– –	YES
		85.1	53.7	POS	POS	YES	YES	YES	YES	– –	YES
		99.8	63.0	POS	POS	YES	YES	YES	YES	– –	YES
		120.0	75.7	POS	POS	YES	YES	YES	YES	– –	YES
	1024×768	60.0	48.4	NEG	NEG	YES	YES	YES	YES	STILL	YES
		70.1	56.5	NEG	NEG	YES	YES	YES	YES	– –	YES
		75.0	60.0	POS	POS	YES	YES	YES	YES	STILL	YES
		85.0	68.7	POS	POS	YES	YES	YES	YES	– –	YES
		100.6	80.5	NEG	NEG	YES	YES	YES	YES	– –	NO
	1152×864	75.0	67.5	POS	POS	YES	YES	YES	YES	STILL	YES
	1280×768	56.2	45.1	POS	POS	YES	YES	– –	YES	WIDE1	NO
	1360×765	60.0	47.7	POS	POS	YES	YES	– –	YES	WIDE1	NO
	1360×768	60.0	47.7	POS	POS	YES	YES	– –	YES	WIDE1	NO
	1376×768	59.9	48.3	NEG	POS	YES	YES	– –	YES	WIDE2	YES
	1280×1024	60.0	64.0	POS	POS	YES	YES	YES*4	YES	– –	YES
		75.0	80.0	POS	POS	YES	YES	YES*4	YES	– –	NO
		85.0	91.1	POS	POS	YES	YES	YES*4	YES	– –	NO
	1600×1200	60.0	75.0	POS	POS	YES	YES	YES	YES	– –	NO
		65.0	81.3	POS	POS	YES	YES	YES	YES	– –	NO
		70.0	87.5	POS	POS	YES	YES	YES	YES	– –	NO
		75.0	93.8	POS	POS	YES	YES	YES	YES	– –	NO
*Apple Macintosh*6	640×480	66.7	35.0	Sync on G	Sync on G	– –	– –	YES*3	YES	– –	NO
	832×624	74.6	49.7	Sync on G	Sync on G	– –	– –	YES	YES	– –	NO
	1024×768	74.9	60.2	Sync on G	Sync on G	– –	– –	YES	YES	WIDE1	NO
	1152×870	75.1	68.7	Sync on G	Sync on G	– –	– –	YES	YES	WIDE1	NO
Work Station (EWS4800)	1280×1024	60.0	64.6	NEG	NEG	YES	YES	YES*4	YES	– –	YES
		71.2	75.1	NEG	NEG	YES	YES	YES*4	YES	– –	NO
Work Station (HP)	1280×1024	72.0	78.1	– –	– –	– –	– –	YES*4	YES	– –	NO
Work Station (SUN)	1152×900	66.0	61.8	C Sync	C Sync	– –	– –	YES	YES	– –	NO
		76.0	71.7	C Sync	C Sync	– –	– –	YES	YES	– –	NO
	1280×1024	76.1	81.1	C Sync	C Sync	– –	– –	YES*4	YES	– –	NO
Work Station (SGI)	1024×768	60.0	49.7	– –	– –	– –	– –	YES	YES	– –	YES
	1280×1024	60.0	63.9	– –	– –	– –	– –	YES*4	YES	– –	YES
IDC-3000G											
PAL625P	768×576	50.0	31.4	NEG	NEG	YES	YES	YES*7	YES*7	– –	NO
NTSC525P	640×480	59.9	31.5	NEG	NEG	YES	YES	YES*7	YES*7	MOTION	NO

*1 Only when using a graphic accelerator board that is capable of displaying 852×480.
*2 Display only 400 lines with the screen center of the vertical orientation located at the center.
*3 The picture is displayed in the original resolution.
The picture will be compressed for other signals.
*4 Aspect ratio is 5:4. This signal is converted to a 600 dots×480 lines signal.
*5 Normally the RGB select mode suite for the input signals is set automatically. If the picture is not displayed properly, set the RGB mode prepared for the input signals listed in the table above.
*6 To connect the monitor to Macintosh computer, use the supplied monitor adapter (D-Sub 15-pin) to your computer's video port. If your computer has a mini D-Sub 15-pin connector, you may have to use the supplied RGB cable.
*7 Other screen modes (ZOOM and STADIUM) are available as well.

NOTE:

- *While the input signals comply with the resolution listed in the table above, you may have to adjust the position and size of the picture or the fine picture because of errors in synchronization of your computer.*
- *This monitor has a resolution of 853 dots × 480 lines. It is recommended that the input signal should be VGA, wide VGA, or equivalent.*
- *With digital input some signals are not accepted.*
- *The sync may be disturbed when a nonstandard signal other than the aforementioned is input.*
- *If you are connecting a composite sync signal, use the HD terminal.*

* "IBM PC/AT" and "VGA" are registered trademarks of International Business MachinesM, Inc. of the United States.
* "Apple Macintosh" is a registered trademark of Apple Computer, Inc. of the United States.

Troubleshooting

If the picture quality is poor or there is some other problem, check the adjustments, operations, etc., before requesting service.

Symptom	Checks	Remedy
Picture is disturbed. Sound is noisy. Remote control operates erroneously.	• Is a connected component set directly in front or at the side of the display?	• Leave some space between the display and the connected components.
The remote control does not work.	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
Monitor's power does not turn on when the remote control's power button is pressed.	• Is the monitor's power cord plugged into a power outlet?	• Plug the monitor's power cord into a power outlet.
	• Are all the monitor's indicators off?	• Press the power button on the monitor to turn on the power.
	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
Monitor does not operate when the remote control's buttons are pressed.	• Is the remote control pointed at the monitor, or is there an obstacle between the remote control and the monitor?	• Point the remote control at the monitor's remote control sensor when pressing buttons, or remove the obstacle.
	• Is direct sunlight or strong artificial light shining on the monitor's remote control sensor?	• Eliminate the light by closing curtains, pointing the light in a different direction, etc.
	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
	• The remote cable is plugged into the REMOTE IN terminal (Wired).	• Unplug the remote cable from the monitor.
	• The front panel buttons of the main unit do not function.	• The front panel buttons do not function during Control Lock.
No sound or picture is produced.	• Is the monitor's power cord plugged into a power outlet?	• Plug the monitor's power cord into a power outlet.
Picture appears but no sound is produced.	• Is the volume set at the minimum?	• Increase the volume.
	• Is the mute mode set?	• Press the remote control's MUTE button.
	• Are the speakers properly connected?	• Connect the speakers properly.
	• Is AUDIO INPUT set correctly?	• Set AUDIO INPUT on the OPTION menu correctly.
Poor picture with VIDEO signal input.	• Improper control setting. Local interference. Cable interconnections. Input impedance is not correct level.	• Adjust picture control as needed. Try another location for the monitor. Be sure all connections are secure.
Poor picture with RGB signal input.	• Improper control setting. Incorrect 15 PIN connector pin connections.	• Adjust picture controls as needed. Check pin assignments and connections.
Tint is poor or colors are weak.	• Are the tint and colors properly adjusted?	• Adjust the tint and color (under "PICTURE").
Nothing appears on screen.	• Is the computer's power turned on?	• Turn on the computer's power.
	• Is a source connected?	• Connect source to the monitor.
	• Is the power management function in the standby or off mode?	• Operate the computer (move the mouse, etc.).
Part of picture is cut off or picture is not centered.	• Is the position adjustment appropriate?	• Adjust the "SCREEN" properly.
Image is too large or too small.	• Is the screen size adjustment appropriate?	• Press the "WIDE" button on the remote control and adjust properly.
Picture is unstable.	• Is the computer's resolution setting appropriate?	• Set to the proper resolution.
POWER/STANDBY indicator is lighted in orange or red.	• Horizontal and / or vertical sync signal is not present when the Intelligent Power Manager control is on.	• Check the input signal.
POWER/STANDBY indicator is blinking in red.	• The temperature inside the main unit has become too high and has activated the protector.	• Promptly switch off the power of the main unit and wait until the internal temperature drops. See*1.
POWER/STANDBY indicator is blinking in green and red, or green.	———	• Prompty switch off the power of the main unit. See *2.

*1 Overheat protector

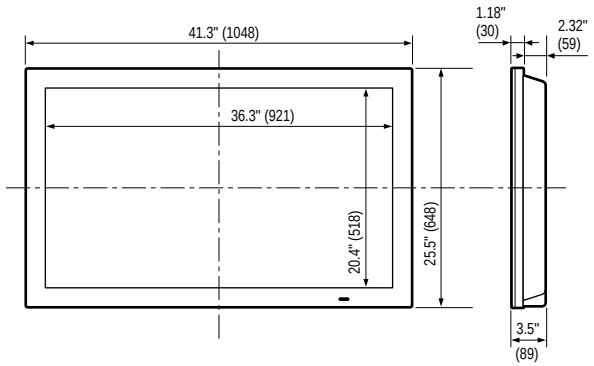
If the monitor becomes too hot, the overheat protector will be activated and the monitor will be turned off. If this happens, turn off the power to the monitor and unplug the power cord. If the room where the monitor is installed is particularly hot, move the monitor to a cooler location and wait for the monitor to cool for 60 minutes. If the problem persists, contact your Toshiba dealer for service.

*2 In the following case, power off the monitor immediately and contact your dealer or authorized Service Center.

The monitor turns off 5 seconds after powering on and then the POWER/STANDBY indicator blinks. It indicates that the power supply circuit or, plasma display panel or, temperature sensor has been damaged.

Specifications

Product Name	Plasma monitor 42WP26H/42WP26K/ 42WP26R
Screen Size	36.3"(H)×20.4"(V) inches 921(H)×518(V) mm diagonal 42"
Aspect Ratio	16 : 9
Resolution	853(H)×480(V) pixels
Pixel Pitch	0.04"(H)×0.04"(V) inches 1.08(H)×1.08(V) mm
Color Reproduction	256 levels, 16,770,000 colors
Signals	
Synchronization Range	Horizontal : 15.5 to 93.8 kHz (automatic : step scan) Vertical : 50.0 to 120 Hz (automatic : step scan)
Input Signals	RGB, NTSC (3.58/4.43), PAL (B,G,M,N), PAL60, SECAM, HD*1 , DVD*1 , DTV*1
Input Terminals	
RGB	
Visual 1 (Analog)	mini D-sub 15-pin×1
Visual 2 (Analog)	BNC (R, G, B, H/CS, V)×1*2
Visual 3 (Digital)	DVI-I 29-pin×1*3 (Not compatible with analog input)
Video	
Visual 1	RCA-pin×1
Visual 2	S-Video: DIN 4-pin×1
Visual 3	BNC (G/Y/VIDEO3)×1*2
DVD/HD/DTV	
Visual 1	RCA-pin (Y, PB[CB], PR[CR])×1*1
Visual 2	BNC (Y, PB[CB], PR[CR])×1*1, *2
Audio	Stereo RCA×3 (selectable)
External Control	D-sub 9-pin×1(RS-232C)
Sound output	7W+7W at 6 ohm
Power Supply	AC100-240V 50/60Hz
Current Rating	4.6A (maximum)
Power Consumption	280W (typical)
Dimensions	41.3 (W)×25.5 (H)×3.5 (D) inches 1048 (W)×648 (H)×89(D) mm
Weight	61.8 lbs / 28.5 kg
Environmental Considerations	
Operating Temperature	0°C to 40°C / 32°F to 104°F
Humidity	20 to 80% (no condensation)
Storage Temperature	-10°C to 50°C / 14°F to 122°F
Humidity	10 to 90% (no condensation)
Front Panel User Controls	Power on/off, Input source select, Volume up/down, OSM control
Remote Control Functions	Power on/off, Input source select, OSM control,Volume up/down, Cursor (UP, DOWN,LEFT, RIGHT), Pointer, Zoom up/ down, Off timer, Wireless / Wired remote control
OSM Functions	Picture (Contrast / Brightness / Sharpness / Color / Tint / Picture mode / Color temperature / Noise reductions), Sound (Bass / Treble / Balance), Screen (V-Position / H-Position / V-Height / H-Width / Auto Picture / Fine picture / Picture adjustment), Function (OSM / OSM adjustment / Power management / Gray level / Cinema mode / RGB3 adjustment, Long Life (PLE, Orbiter, Inverse, White, Screen wiper)/ Reset) / Option (Audio input / BNC select / RGB select / HD select), Information (Frequency / Language* / Color system) *English, German, French, Italian, Spanish, Swedish, Japanese



Units are in inch
(mm)

The features and specifications may be subject to change without notice.

***1 HD/DVD/DTV input signals supported on this system**

480P (60 Hz)	480I (60 Hz)
525P (60 Hz)	525I (60 Hz)
576P (50 Hz)	576I (50 Hz)
625P (50 Hz)	625I (50 Hz)
720P (60 Hz)	1035I (60 Hz)
1080I (50 Hz)	1080I (60 Hz)

***2 The 5-BNC connectors are used as RGB/PC2, HD/ DVD2 and VIDEO3 input. Select one of them under "BNC SELECT".**

***3 It doesn't cope with copy protection.**

Other Features	3D motion adaptive Scan Converter with 2-2 (50Hz), 2-3 (60Hz) pull down Converter, Digital Zoom function (100-900% Selectable), Self Diagnosis, Anti Image Burn, Color Temperature Select, Control Lock, Power management, Plug and play (DDC1, DDC2b, RGB3: DDC2b only)
Accessories	Remote control with two AAA batteries, Remote cable, RGB cable (Mini D-Sub 15-pin to Mini D-Sub 15-pin connector), Power cord, User's Manual, Safety metal fittings, Screw for Safety metal fittings, Ferrite cores, Bands
Regulations	Meets class A requirements (EN55022, EN61000-3-2, EN61000-3-3, EN55024) Meets Low Voltage Directive (EN60950, SEMKO Approved) Meets AS/NZS 3548 Class A

TROUBLESHOOTING

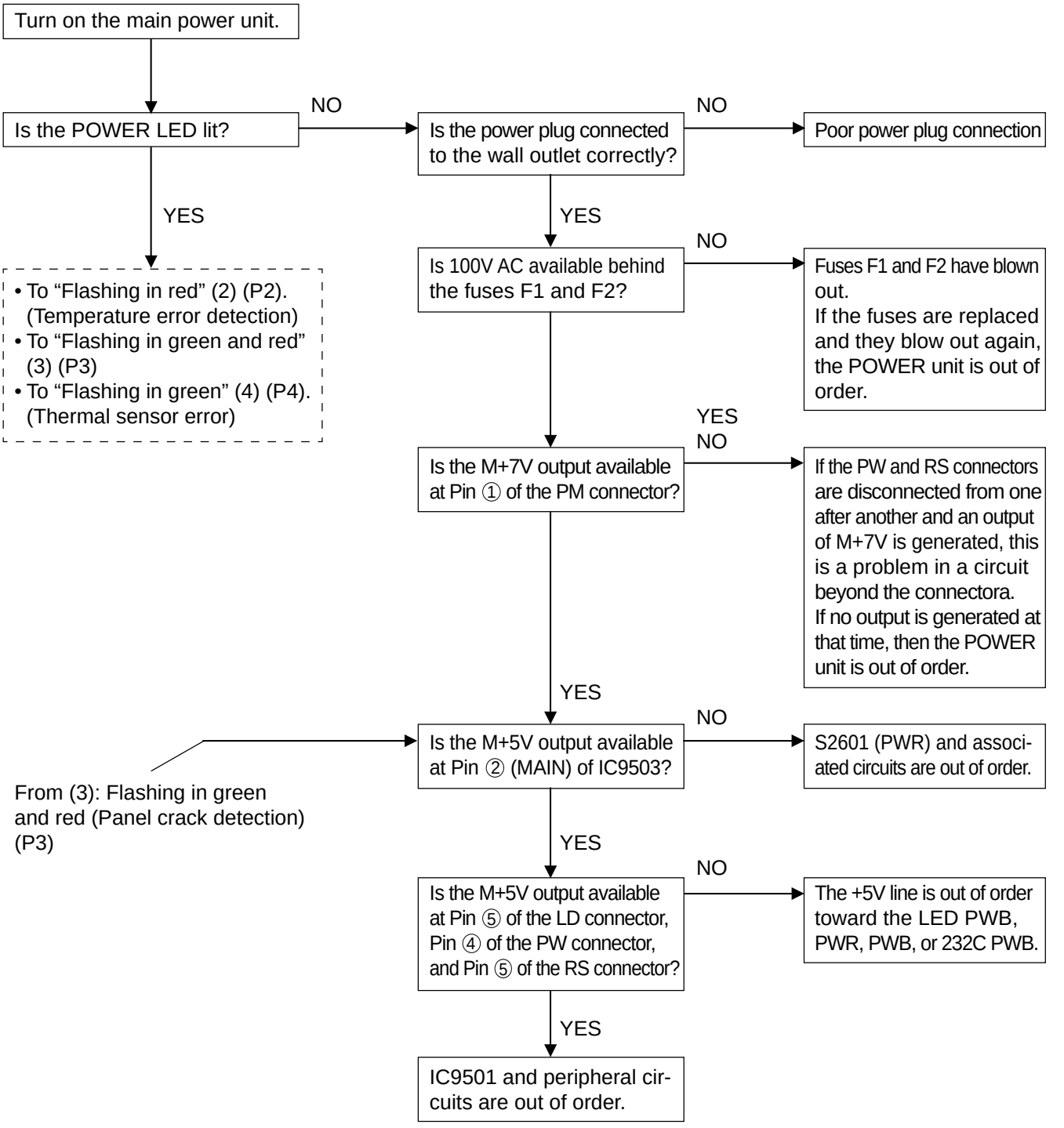
- In the case of abnormality in the POWER system, such as “No power available” or “Alarm (LED flashing)”
  Go to → **1. Power failure (P1)**

- In the case of abnormality in the VIDEO system, such as “No picture” or “Picture errors”
  Go to → **2. No picture displayed, picture errors (P5)**

- In the case of no audio output
  Go to → **3. No audio output generated (P11)**

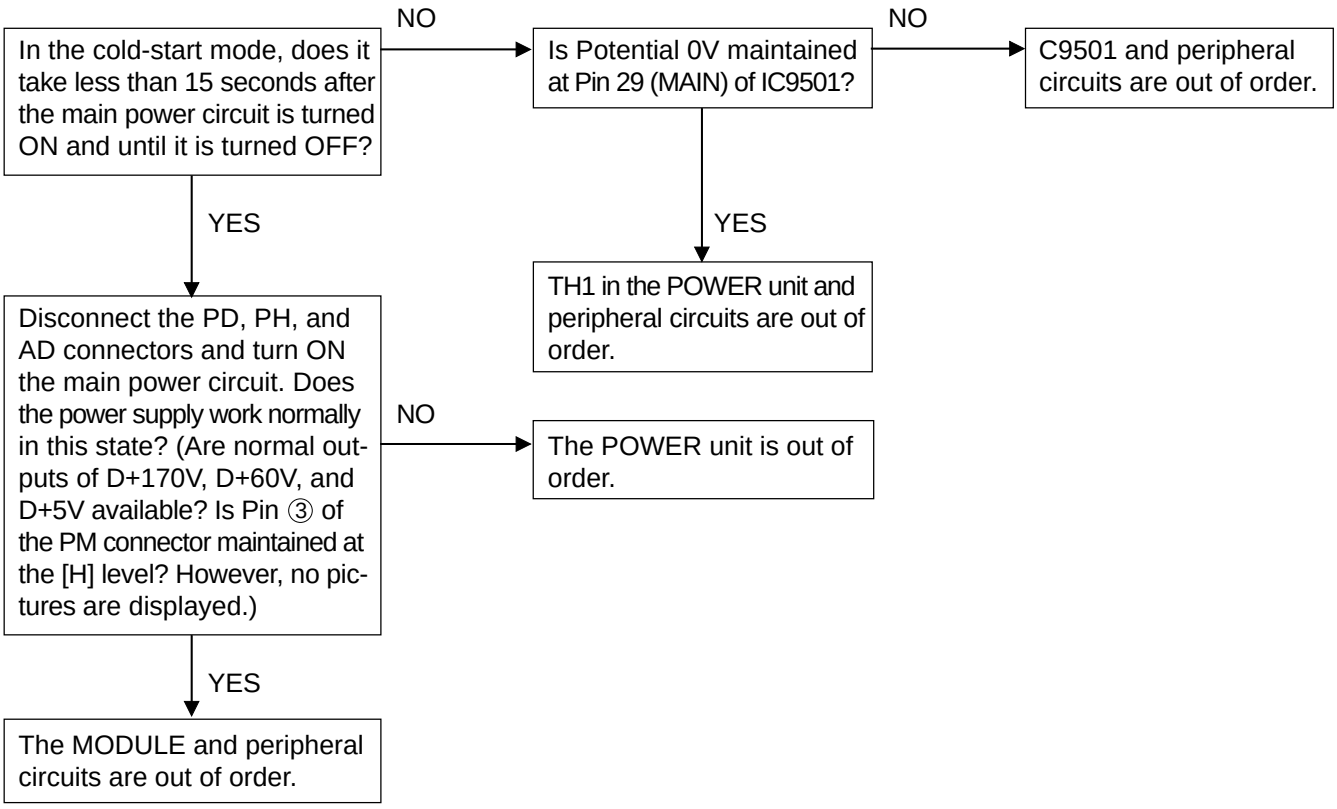
1. Power failure

(1) POWER is turned OFF.

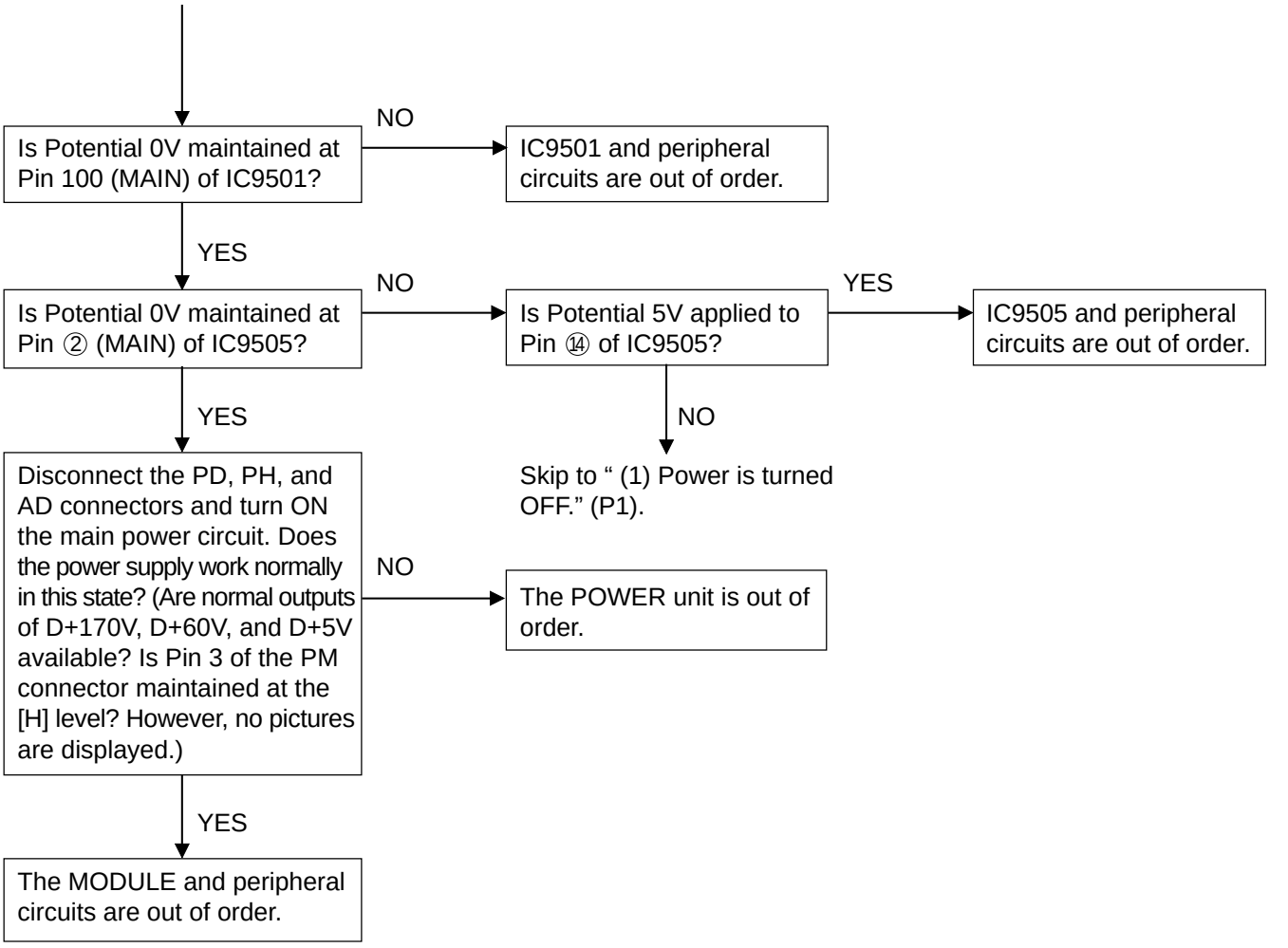

Turn on the main power unit.
Is the POWER LED lit?
NO
YES
Is the power plug connected to the wall outlet correctly?
NO
Poor power plug connection
YES
Is 100V AC available behind the fuses F1 and F2?
NO
Fuses F1 and F2 have blown out.
If the fuses are replaced and they blow out again, the POWER unit is out of order.
• To “Flashing in red” (2) (P2). (Temperature error detection)
• To “Flashing in green and red” (3) (P3)
• To “Flashing in green” (4) (P4). (Thermal sensor error)
YES
NO
Is the M+7V output available at Pin ① of the PM connector?
If the PW and RS connectors are disconnected from one after another and an output of M+7V is generated, this is a problem in a circuit beyond the connectora.
If no output is generated at that time, then the POWER unit is out of order.
YES
From (3): Flashing in green and red (Panel crack detection) (P3)
Is the M+5V output available at Pin ② (MAIN) of IC9503?
NO
S2601 (PWR) and associated circuits are out of order.
YES
Is the M+5V output available at Pin ⑤ of the LD connector, Pin ④ of the PW connector, and Pin ⑤ of the RS connector?
NO
The +5V line is out of order toward the LED PWB, PWR, PWB, or 232C PWB.
YES
IC9501 and peripheral circuits are out of order.

(Caution) When the LED is flashing (protector in operation), all power lines other than M+7 are automatically turned off. When checking the power lines other than the M+7V system, a circuit tester or the like should be connected to the measuring point in advance, for confirmation.

(2) Flashing in red (Temperature error detection)


In the cold-start mode, does it take less than 15 seconds after the main power circuit is turned ON and until it is turned OFF?
NO
Is Potential 0V maintained at Pin 29 (MAIN) of IC9501?
NO
C9501 and peripheral circuits are out of order.
YES
TH1 in the POWER unit and peripheral circuits are out of order.
YES
Disconnect the PD, PH, and AD connectors and turn ON the main power circuit. Does the power supply work normally in this state? (Are normal outputs of D+170V, D+60V, and D+5V available? Is Pin ③ of the PM connector maintained at the [H] level? However, no pictures are displayed.)
NO
The POWER unit is out of order.
YES
The MODULE and peripheral circuits are out of order.

(3) Flashing in green and red (Panel crack detection)


Is Potential 0V maintained at Pin 100 (MAIN) of IC9501?
NO
IC9501 and peripheral circuits are out of order.
YES
Is Potential 0V maintained at Pin ② (MAIN) of IC9505?
NO
Is Potential 5V applied to Pin ⑭ of IC9505?
YES
IC9505 and peripheral circuits are out of order.
YES
NO
Skip to " (1) Power is turned OFF." (P1).
Disconnect the PD, PH, and AD connectors and turn ON the main power circuit. Does the power supply work normally in this state? (Are normal outputs of D+170V, D+60V, and D+5V available? Is Pin 3 of the PM connector maintained at the [H] level? However, no pictures are displayed.)
NO
The POWER unit is out of order.
YES
The MODULE and peripheral circuits are out of order.

(Caution) How to cancel the alarm condition:

- While flashing in green and red occurs, the power supply cannot be reset by ON/OFF operation at the main power switch, remote control, and wall outlet.
- For alarm resetting, keep pressing the input selector key at the main unit of the set and move the mains power switch to [ON] at the main unit. In this state, it is necessary to keep pressing the input selector key of the main unit for more than 2 seconds.

(4) Flashing in green (Thermal sensor error)

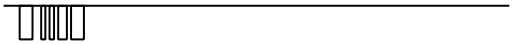
Are the TM and TR connectors connected correctly?
Are these connectors free from poor connections?

NO → Insert each connector again to remove poor connection.

YES

Disconnect the TM connector on the MAIN PWB side and examine the correctness of voltages and waveforms for the following three points:
(1) The voltage is 5V at Pin ③ of the MAIN TM.
(2) The waveform (I2C CLK) is 5Vpp at Pin ① of the MAIN TM.

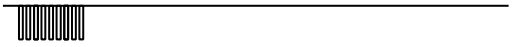
(3) The waveform (I2C DATA) is 5Vpp at Pin ② of the MAIN TM.



NO → The MAIN PWB is out of order.

YES

Connect (return) the TM connector cable on the MAIN PWB side and disconnect the TR connector on the SENB PWB side.
Then examine the correctness of voltages and waveforms for the following three points:
(1) The voltage is 5V at Pin ③ of the SENB TM.
(2) The waveform (I2C CLK) is 5Vpp at Pin ① of the SENB TM.



(3) The waveform (I2C DATA) is 5Vpp at Pin ② of the SENB TM.

NO → The TM connector cable or the SENB PWB is out of order.

YES

Connect (return) the TR connector cable on the SENB PWB side and examine the correctness of voltages and waveforms for the following three points:
(1) The voltage is 5V at Pin ③ of the SENC TR.
(2) The waveform (I2C CLK) is 5Vpp at Pin ① of the SENC TR.

(3) The waveform (I2C DATA) is 5Vpp at Pin ② of the SENC TR.

NO → The TR connector cable or the SENC PWB is out of order.

YES

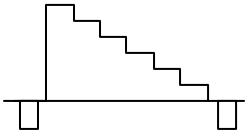
The SENB PWB or the SENC PWB is out of order.

2. No picture displayed and picture errors

(Caution) IPXXXX is installed in the MAIN PWB. This component is inserted in the power line. If there is any error occurring in the circuit, this component functions to prevent the evolution of this problem to other areas. Accordingly, check whether the same voltage is generated at both ends of the component. (In normal state, the component is internally short-circuited.) If the same voltage is not generated, this means that the MAIN PWB is out of order. The same check is needed also for the DSP PWB.

(1) No picture displayed

Enter an input of NTSC gray scale in the input circuit of VIDEO 1, and select VIDEO INPUT 1. The screen size is set at FULL.

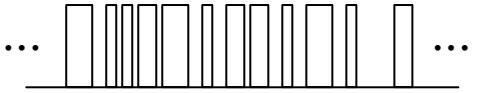


Is ON-screen display available?

NO → To “No presentation of pictures and ON-screen display” (P7)

YES

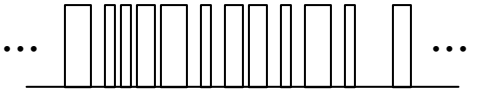
Is a signal of about 3Vp-p available at any of Pins 190 to 244 of IC8501 (POWER and GND terminals excluded)?



YES → The MAIN PWB is out of order.

NO

Is a signal of about 3Vp-p available at any of Pins 101 to 159 of the AM connector (GND terminal excluded) in the DSP PWB?



NO → The MAIN PWB is out of order.

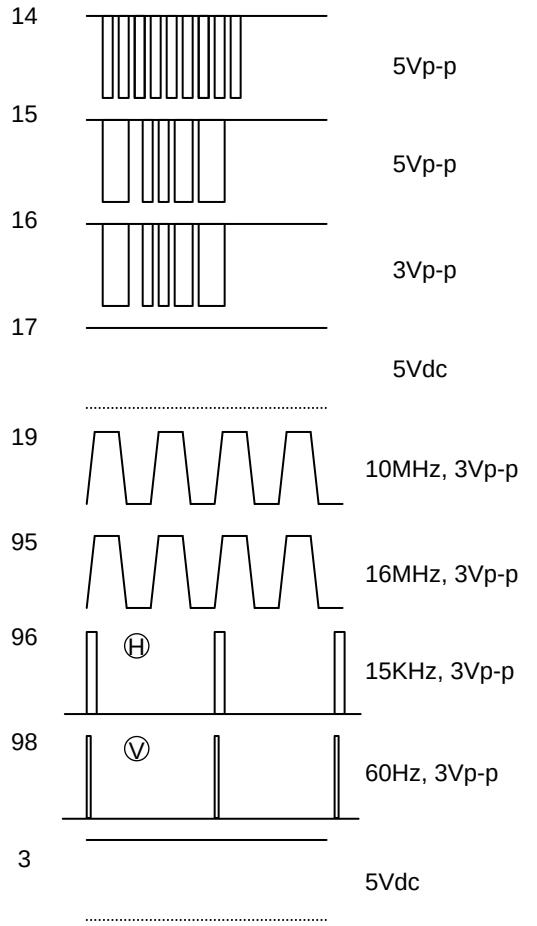
YES

(1)-1 (P6)

(1)-1 (P5)

Are the signals below available at Pins 14 to 17, 19, 95, 96, and 98 of the AM connector and at Pin 3 (IP8001) in the DSP PWB?

YES → The DSP PWB is out of order.



NO

Are the specified voltages available at the connectors below? (Power source check)

YES → The MAIN PWB is out of order.

Connector name	Pin No.	Voltage
PN	1	3.3Vdc
PV	1	13Vdc
	3	5Vdc
	5	6Vdc

NO

The POWER unit is out of order.

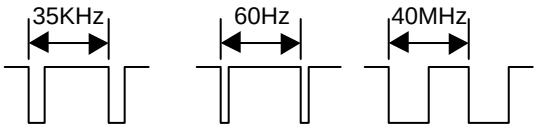
No presentation of pictures and ON-screen display

Are pulses of 3Vp-p available at Pins 2, 3, and 4 of the AD connector?

NO → The MAIN PWB is out of order.

YES

Are the horizontal/vertical sync signals of 3Vp-p available at Pins 27/28 of IC9401, and a clock signal at Pin 31?



NO → The MAIN PWB is out of order.

YES

Are the signals of 3Vp-p (signal name: REV_LVDS, RODD_LVDS, etc.) available at the signal input pin of IC9401?

NO

YES

Is normal display available when the AD, PD, or PH cable is replaced?

YES → Each cable is defective.

NO

Is normal display available when the MAIN PWB is replaced?

YES → The MAIN PWB is out of order.

YES

Are 170V, 60V, and D+5V of the POWER unit normally output?

NO → See “1. Power failure.” (P1)

YES

The plasma display module is out of order.

Are the specified voltages available at the connectors below? (Power source check)

YES → The MAIN PWB is out of order.

Connector name	Pin No.	Voltage
PN	1	3.3Vdc
PV	1	13Vdc
	3	5Vdc
	5	6Vdc

NO

Is 5V DC applied to Pin 5 of the PM connector?

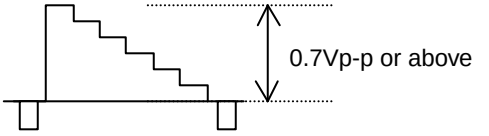
NO → The MAIN PWB is out of order.

YES

The POWER unit is out of order.

(2) Picture errors

Display a picture in error mode. However, the video signal level shall be maintained above 0.7Vp-p.



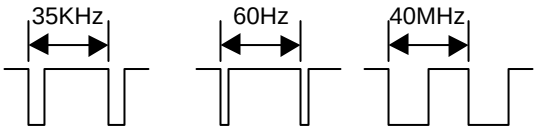
YES

Are pulses of 3Vp-p available at Pins 2, 3, and 4 of the AD connector?

NO

YES

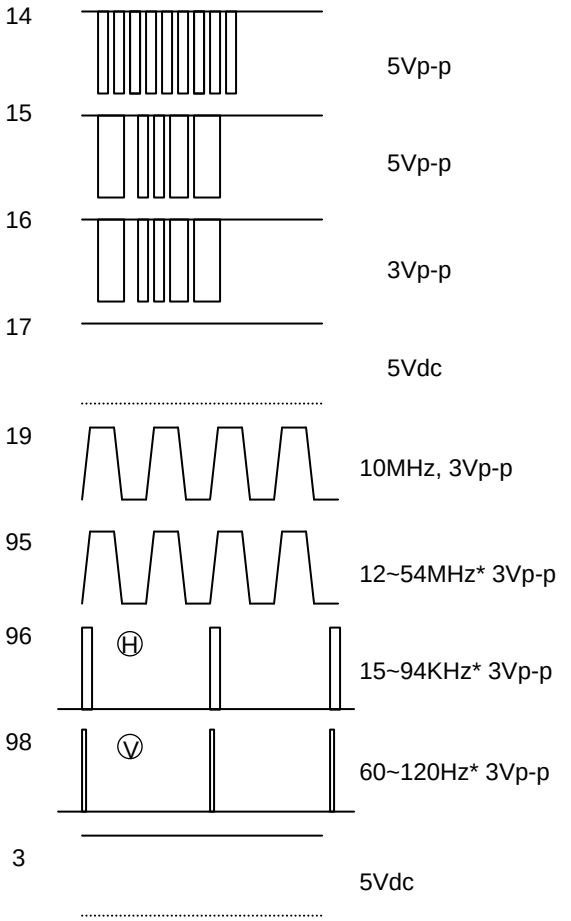
Are the horizontal/vertical sync signals of 3Vp-p available at Pins 27/28 of IC9401, and a clock signal at Pin 31?



NO

YES

Are the signals below available at Pins 14 to 17, 19, 95, 96, and 98 of the AM connector and at Pin 3 (IP8001) in the DSP PWB?



YES

(2)-1 (P9)

NO

Are the specified voltages available at the connectors below?
(Power source check)

Connector name	Pin No.	Voltage
PN	1	3.3Vdc
PV	1	13Vdc
	3	5Vdc
	5	6Vdc

YES

The MAIN PWB is out of order.

NO

The POWER unit is out of order.

* Changed according to the input signal.

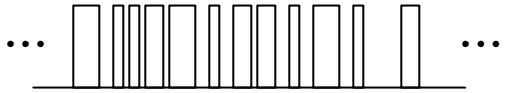
(2)-1 (P8)

Does this phenomenon correspond to “Specific gradations (brightness) are tinted.”?

NO

YES

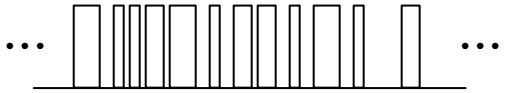
Are the signals of 3Vp-p (signal name:REV_ LVDS, RODD_LVDS, etc.) available at all the signal input pin of IC9401?



YES → (2)-2 (P10)

NO

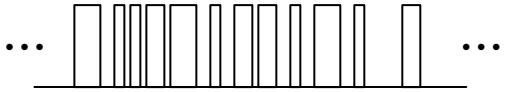
Is a signal of about 3Vp-p available at all Pins 190 to 244 of IC8501 (POWER and GND terminals excluded)?



YES → The MAIN PWB is out of order.

NO

Is a signal of about 3Vp-p available at all Pins 101 to 159 of the AM connector (GND terminal excluded) in the DSP PWB?



YES → The DSP PWB is out of order.

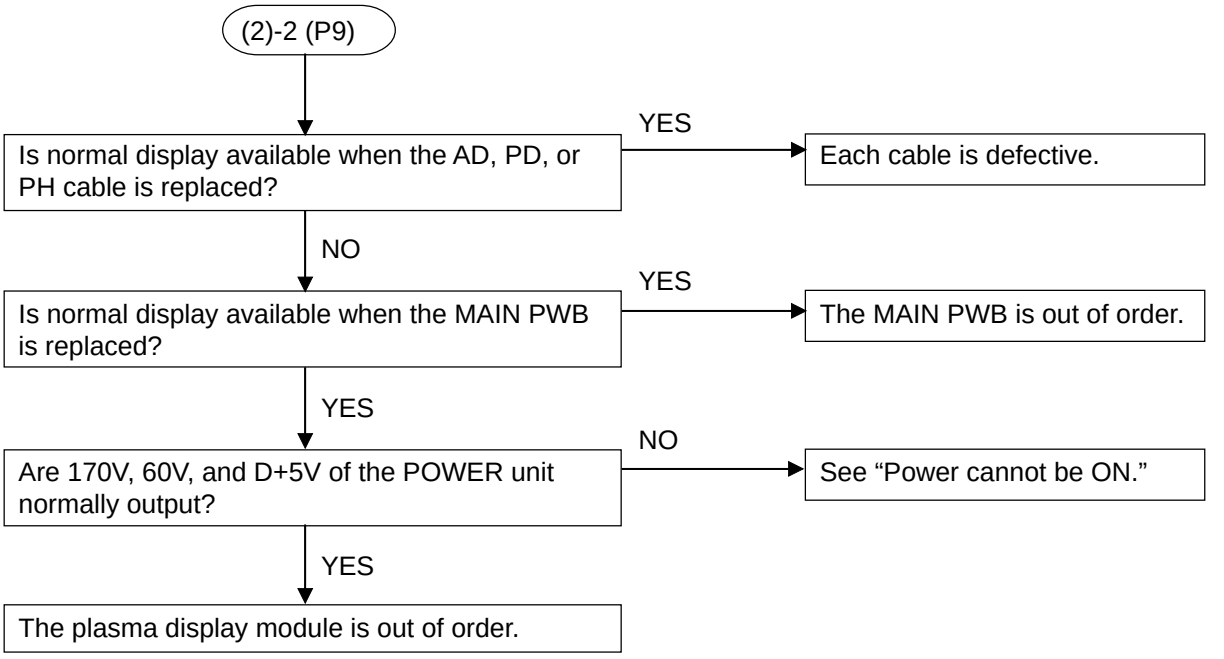
NO

Are the specified voltages available at the connectors below? (Power source check)

Connector name	Pin No.	Voltage
PN	1	3.3Vdc
PV	1	13Vdc
	3	5Vdc
	5	6Vdc

YES → The MAIN PWB is out of order.

NO → The POWER unit is out of order.


(2)-2 (P9)
Is normal display available when the AD, PD, or PH cable is replaced?
YES
Each cable is defective.
NO
Is normal display available when the MAIN PWB is replaced?
YES
The MAIN PWB is out of order.
YES
Are 170V, 60V, and D+5V of the POWER unit normally output?
NO
See “Power cannot be ON.”
YES
The plasma display module is out of order.

3. No audio output generated

Note) This model is enabled to set up an audio input terminal independent of the video input terminal. No audio output is available unless the input terminal of the displayed pictures (example: VIDEO 1) coincides with that of audio (example: RGB 3). Therefore, analysis for troubleshooting should be carried out after the displayed video input terminal (example: VIDEO 1) has been made to coincide with the audio input terminal according to the instruction manual.

Enter a signal input in AUDIO IN.

↓

Is the audio signal present at the speaker OUT? → YES → Speaker or cable is defective.

↓ NO

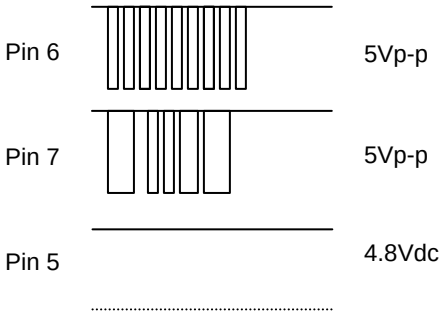
Are the voltages specified below available at the PA connector of the AUDIO unit? → NO → The POWER unit or the cable is out of order.
(Power source check)

Pin	Signal name	Voltage
1	S+24	+23.5~33Vdc
2	S+24	+23.5~33Vdc
3	S.GND	GND
4	S.GND	GND
5	A+13	+13Vdc
6	A.GND	GND

(Note) When checking the source voltage by disconnecting the PA connector, short-circuit the section between Pins ③ ④ of the PA and Pin ⑥ (so that S.GND of the power unit and A.GND can be short-circuited). Since then, the power unit can be turned on.

↓ YES

Are the following waveforms observed at the AU connector of the AUDIO unit? → NO → The MAIN PWB or the cable is out of order.



Pin 1, 2 : Audio signal waveforms

↓ YES

The AUDIO unit is out of order.

METHOD OF ADJUSTMENTS

Adjustments should be carried out in accordance with the procedures described below. However, any adjustments other than the items A to C below are not required.

A. When the [PDP module] is replaced, adjust the sections according to the adjusting items [1 to 3] specified below.
B. When the [POWER unit] is replaced, adjust the sections according to the adjusting items [1 to 3] specified below.
C. When the [MAIN PWB] is replaced, adjust the sections according to the adjusting item [4 and 5] specified below.

(CAUTION) When you exchange PDP module, please be sure to clear integrated time to [0] by the following "How to clear the integrated time".

*** How to clear the integrated time**

Assume the folloing factory mode by the use of the remote control. Press [PROCEED] key six times to get the screen of [USAGE TIME]. In this state, the integrated time up to the present time is displayed.
The integrated time is cleared to [0] when the remote control keys are pressed in the order of [MUTE] → corsor keys [Λ]→ corsor keys [V] → [OFF TIMER].

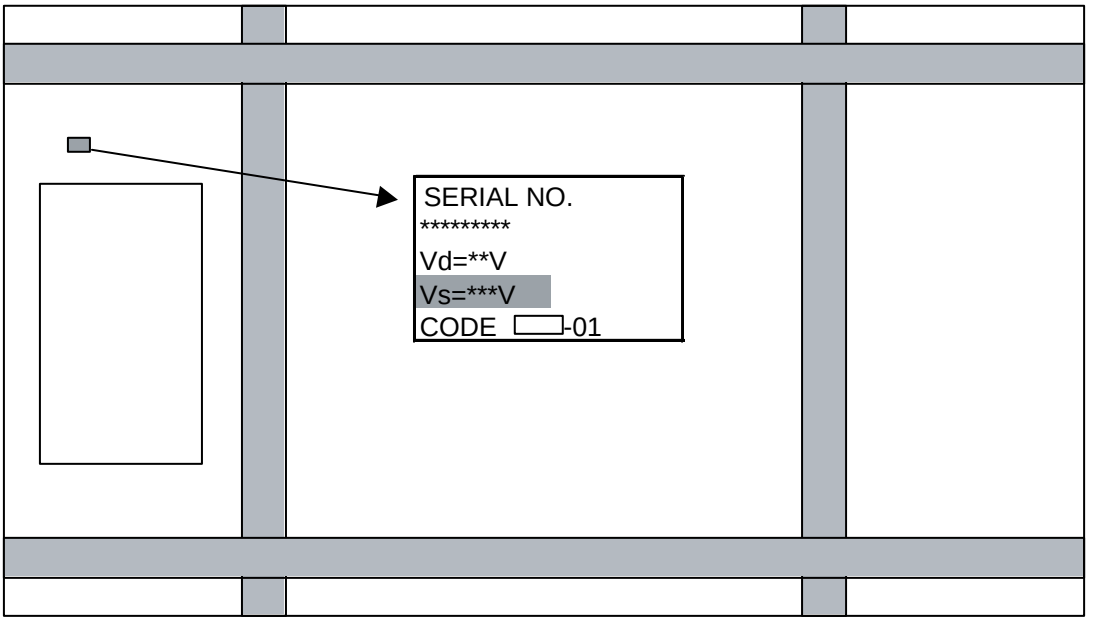
* How to enter or withdraw from the factory setting mode:
Press the keys in the sequential order of [OFF TIMER] → [EXIT] → [MUTE] → [OFF TIMER].

When a conventional remote control is used:
Press the keys in the sequential order of [OFF TIMER] → [OK] → [MUTE] → [OFF TIMER].
At that time, use the [MENU] key in place of the [PROCEED] key.

1. Adjustment of +170V

(1) Using any video signal of VIDEO input, DVD/HD input, or RGB input, and display a color bar signal. Turn on the power switch of the main unit.
(2) Turn the volume control (RV3) in the [+170V ADJ] section of the power unit, and adjust the voltage value between TP3(+170V output) and TP2(GND) of the power unit so that this voltage settles within the range of "specified voltage of the PDP module (Value Vs on the label shown below) ± 1V."

(Caution) The figure below shows a rear side view when the back cover has been removed.



2. Adjustment of +60V

(1) Using any video signal of VIDEO input, DVD/HD input, or RGB input, and display a color bar signal. Turn on the power switch of the main unit.

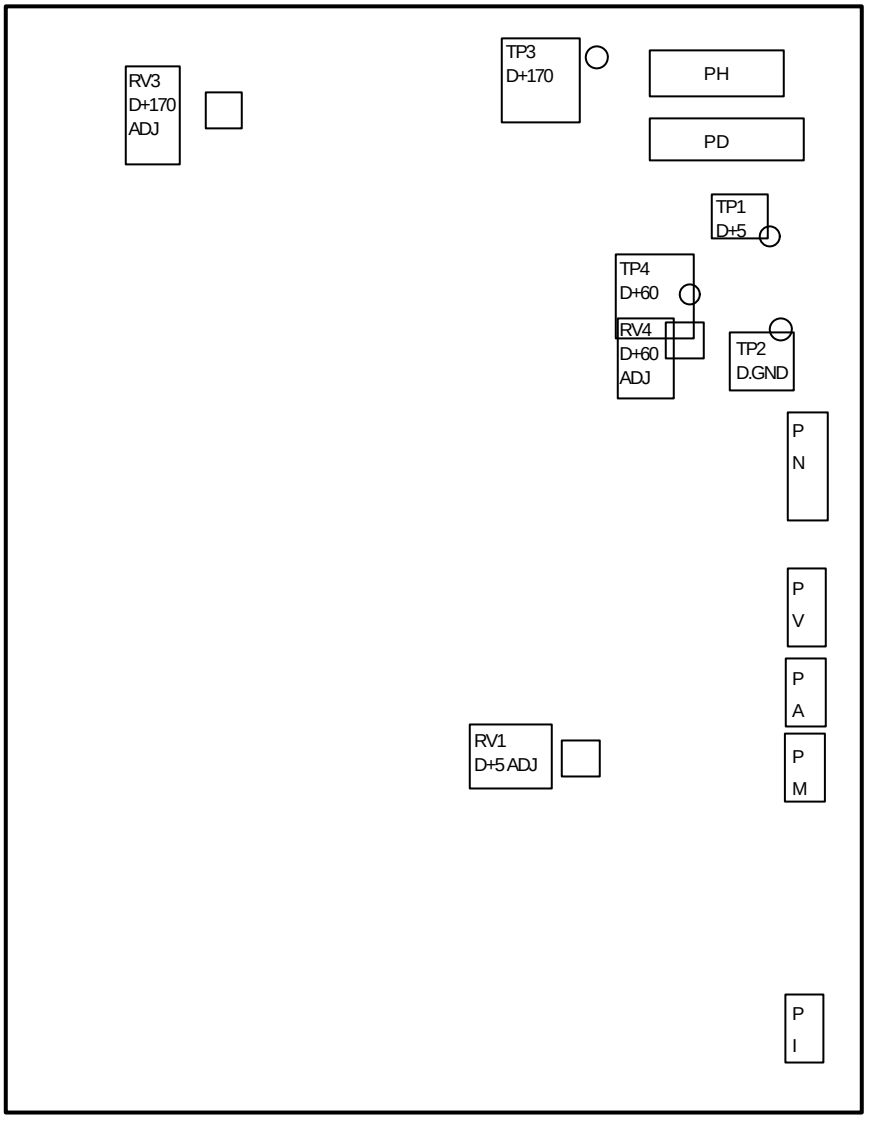
(2) Confirm that the voltage at TP4 (+60V output) and TP2(GND) of the power unit is maintained at a voltage value (Vd value of the label described in Item 1 above) within ± 1V, specified for the PDP module.
Otherwise, turn the volume control (RV4) of the [D+60V ADJ] block until the voltage value (Vd value of the label described in Item 1 above) within ± 1V, specified for the PDP module is secured.

3. Adjustment of +5V

(1) Use any video signal of VIDEO input, DVD/HD input, or RGB input, and display a color bar signal.

(2) Confirm that the voltage value between TP1 (+5V output) and TP2 (GND) of the power unit is maintained at "5.15 ± 0.1V."
Otherwise, turn the volume control (RV1) in the [+5V ADJ] section so that the voltage value is maintained at "5.15 ± 0.1V."

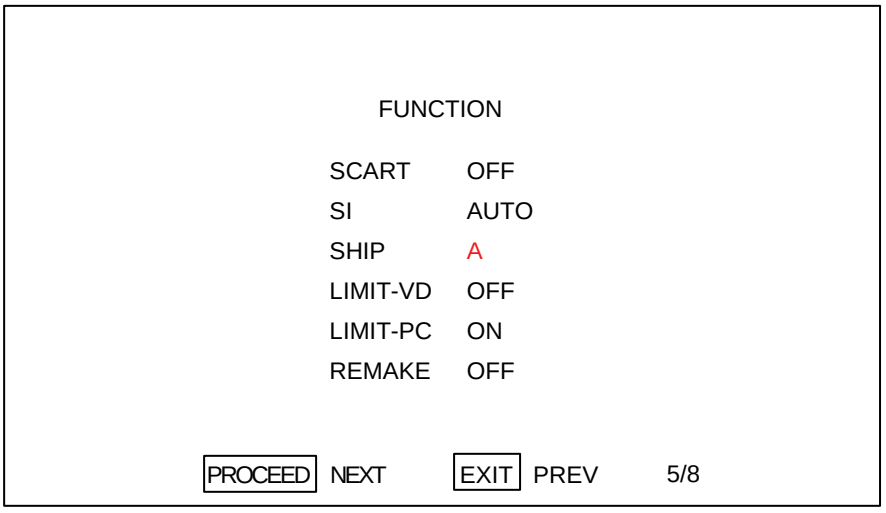
* POWER unit layout



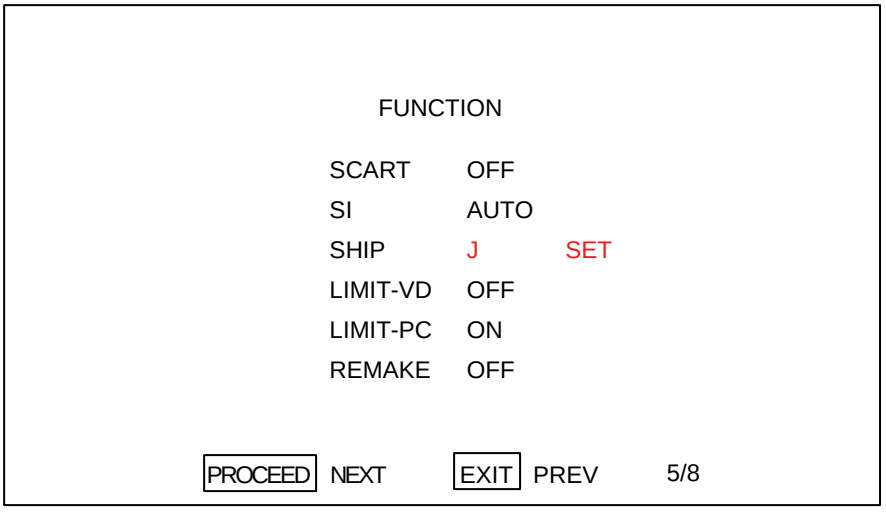
4. Setting for the OSD language, SCART function (Europe), and 525P color matrix

(1) Enter the factory setting mode by means of the remote control.
(2) Press the [PROCEED] key of the remote control 4 times to obtain the [FUNCTION] menu.
(3) Move the cursor to the [SHIP] item by means of the cursor keys [Λ] and [V], and select the adequate alphabets of the destination specified below, using the cursor keys [<] and [>].

J : PX-42VM3	JW : OEM Specifications for Japan
A : PX-42VM3A	AW : OEM Specifications for North America
G : PX-42VM4G	GW : OEM Specifications for Europe



(4) Press the [MUTE] key → the cursor key [Λ] → the cursor key [V] → the [OFF TIMER] key in this order to make factory setting.
When factory setting is executed, red characters of [SET] are displayed for about 7 seconds at the right of the [destination alphabets]. When the red characters of [SET] go out, this is a sign that the setting has been finished.



(5) Withdraw from the factory setting mode by means of the remote control.

5. Adjustment of VIDEO screen position and phase

5-1. Adjustment of VIDEO screen position

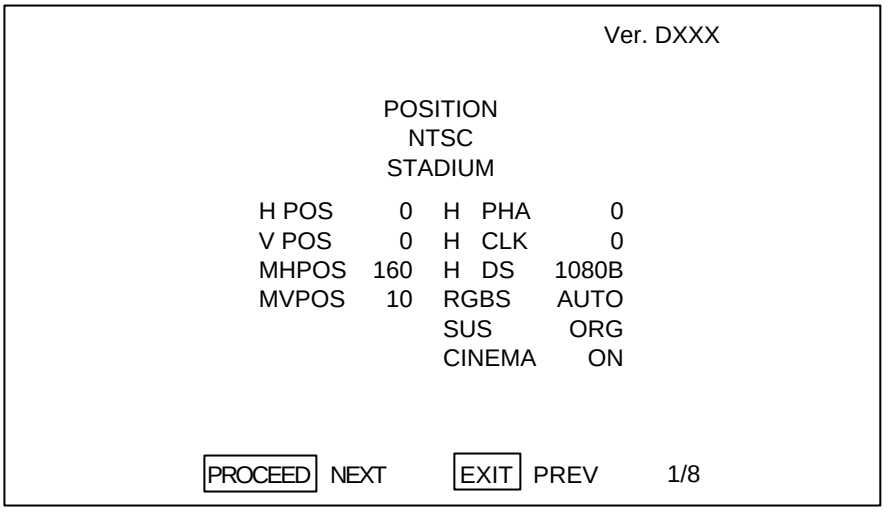
(Caution) Adjustments should be started after returning the [VIDEO] and [SCREEN] setting of the main menu to the initial setting conditions.

(1) Enter an input of NTSC and PAL monoscopic signals in VIDEO 1 and use the [WIDE] key of the remote control to change over the screen size in the sequential order of [NORMAL → FULL → STADIUM → ZOOM]. Confirm in each screen that the screen position is uniformly arranged to the top, bottom, right, and left. If the screen position is found to be unevenly arranged, make adjustments according to the "method of screen position adjustment" shown below.

(2) Enter an input of PAL monoscopic signal in VIDEO 1 and use the [PROCEED] key of the remote control to select [Information] of the main menu. Change over the [color (COLOR SYSTEM)] to [SECAM]. In addition, change over the screen size in the sequential order of [NORMAL → FULL → STADIUM → ZOOM]. Confirm in each screen that the screen position is uniformly arranged to the top, bottom, right, and left. If the screen position is found to be unevenly arranged, make adjustments according to the "method of screen position adjustment" shown below.

[Method of screen position adjustment]

(1) Enter the factory setting mode by means of the remote control.
(2) In the [POSITION] screen ([POSITION] mode for initial setting), make the following setting:

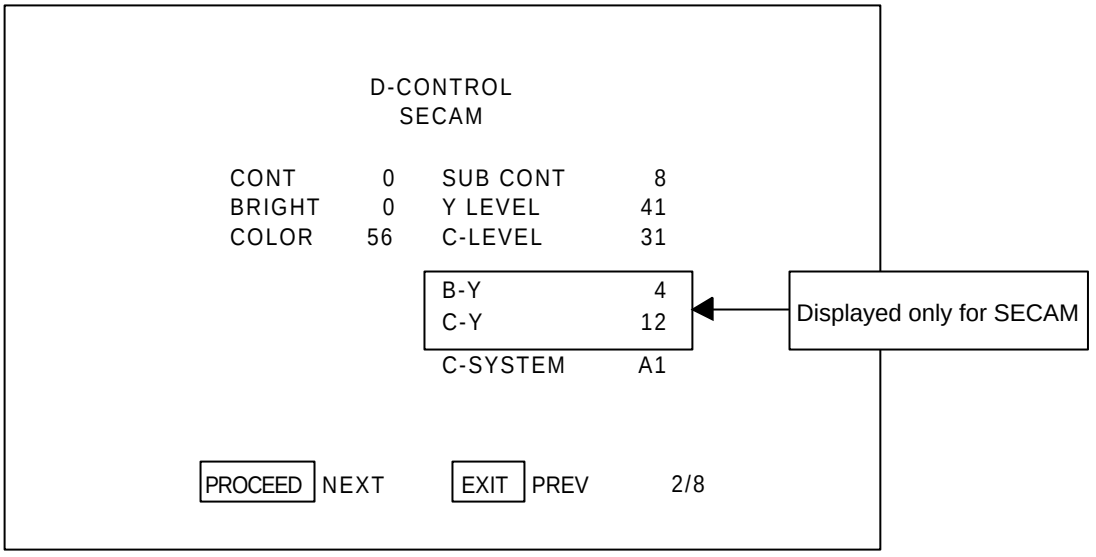


MHPOS : Adjustment of horizontal display range for the display in the PDP module.
MVPOS : Adjustment of vertical raster display range for the display in the PDP module.
H POS : Adjustment of horizontal signal position in the display range.
V POS : Adjustment of vertical signal position in the display range.

(3) Press the WIDE key of the remote control in order to select the NORMAL mode.
(4) When the display range of the PDP module is displaced, press the cursor keys [Λ] and [V] of the remote control to select [MHPOS] and [MVPOS], and make adjustments by pressing the cursor keys [<] and [>].
(5) Press the cursor keys [Λ] and [V] to select [H POS].
(6) Press the cursor keys [<] and [>] to adjust the screen position so that the screen can be arranged evenly to the right and left.
(7) Press the cursor keys [Λ] and [V] to select [V POS].
(8) Press the cursor keys [<] and [>] to adjust the screen position so that the screen can be arranged evenly to the top and bottom.
Confirm that [H PHA] is 0. Otherwise, adjust it to 0 by pressing the cursor keys [<] and [>].
(10) Confirm that [H CLK] is 0. Otherwise, adjust it to 0 by pressing the cursor keys [<] and [>].

(11) In the same manner, press the WIDE key and select [NORMAL → FULL → STADIUM → ZOOM → U-SCAN] in this order. Adjust the screen position so that the screen can be arranged evenly to the top, bottom, right, and left. Confirm that [H PHA] and [H CLK] are 0. Otherwise, press the cursor keys [<] and [>] to adjust them to 0.

(12) This should be done only if SECAM is adjusted as per (2) above.
Press the [PROCEED] key to display the D-CONTROL menu and adjust the cursor to C-SYSTEM by means of the cursor keys [Λ] and [V]. Select [A1] by means of the cursor keys [<] and [>].



(13) Withdraw the factory setting mode.

5-2. Adjustment of DVD/HD screen position

(Caution) Adjustments should be started after returning the [VIDEO] and [SCREEN] setting of the main menu to the initial setting conditions.

(1) Enter an input of HDTV monoscopic signal in the DVD/HD1 IN terminal. Use the [PROCEED] key of the remote control to select [HD SELECT] of [OPTION] of the main menu. Make setting at [1035i] by pressing the cursor keys [<] and [>].

(2) Select [HD IN] with the remote control or the main-unit front key. Confirm that the screen position is uniformly arranged to the top, bottom, right, and left. If the screen position is found to be unevenly arranged, make adjustments according to the “method of screen position adjustment” shown below. (The screen size is FULL only.)

(3) Select the NTSC COMPONENT signal (480i) for the input video signal and change over the screen size in the sequential order of [NORMAL → FULL → STADIUM → ZOOM]. Confirm in each screen that the screen position is uniformly arranged to the top, bottom, right, and left. If the screen position is found to be unevenly arranged, make adjustments according to the “method of screen position adjustment” shown below.

(4) Select the PAL COMPONENT signal (5760i) for the input video signal and change over the screen size in the sequential order of [NORMAL → FULL → STADIUM → ZOOM]. Confirm in each screen that the screen position is uniformly arranged to the top, bottom, right, and left. If the screen position is found to be unevenly arranged, make adjustments according to the “method of screen position adjustment” shown below.

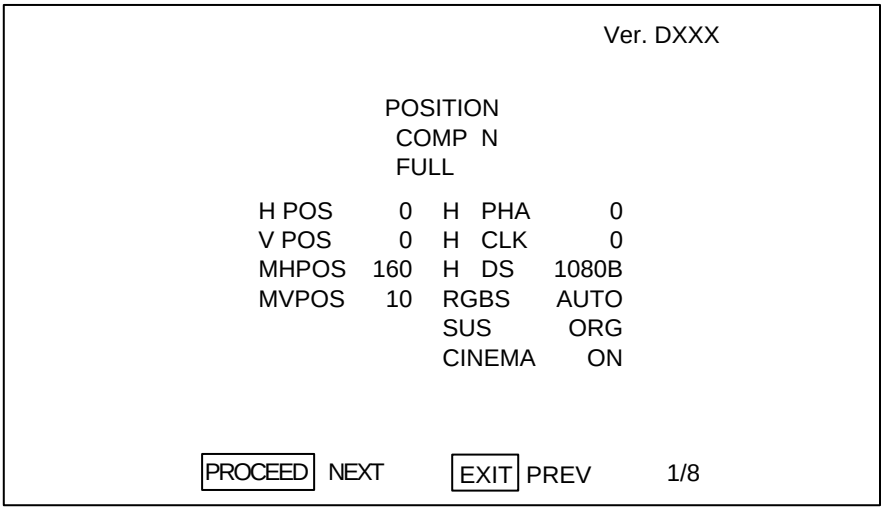
(5) Select the DTC 1080i signal for the input video signal. Select [HD SELECT] of the screen. Make setting at [1035B] by pressing the cursor keys [<] and [>]. Confirm that the screen position is uniformly arranged to the top, bottom, right, and left.
If the screen position is found to be unevenly arranged, make adjustments according to the “method of screen position adjustment” shown below. (The screen size is FULL only.)

(6) Select the DTV 720P signal for the input video signal. Confirm that the screen position is uniformly arranged to the top, bottom, right, and left.
If the screen position is found to be unevenly arranged, make adjustments according to the “method of screen position adjustment” shown below. (The screen size is FULL only.)

(7) Select the DTV 480P signal for the input video signal and change over the screen size in the sequential order of [NORMAL → FULL → STADIUM → ZOOM]. Confirm in each screen that the screen position is uniformly arranged to the top, bottom, right, and left. If the screen position is found to be unevenly arranged, make adjustments according to the “method of screen position adjustment” shown below.

[Method of screen position adjustment]

(1) Enter the factory setting mode by means of the remote control.
(2) In the [POSITION] screen ([POSITION] mode for initial setting), make the following setting:



(3) Press the WIDE key of the remote control in order to select the NORMAL mode.
(4) When the display range of the PDP module is displaced, press the cursor keys [Λ] and [V] of the remote control to select [MHPOS] and [MVPOS], and make adjustments by pressing the cursor keys [<] and [>].
(5) Press the cursor keys [Λ] and [V] to select [H POS].
(6) Press the cursor keys [<] and [>] to adjust the screen position so that the screen can be arranged evenly to the right and left.
(7) Press the cursor keys [Λ] and [V] to select [V POS].
(8) Press the cursor keys [<] and [>] to adjust the screen position so that the screen can be arranged evenly to the top and bottom.
(9) Confirm that [H PHA] is 0. Otherwise, adjust it to 0 by pressing the cursor keys [<] and [>].
(10) Confirm that [H CLK] is 0. Otherwise, adjust it to 0 by pressing the cursor keys [<] and [>].
(11) In the same manner, press the [WIDE] key to select the screen mode. (According to the signal type, the screen mode varies as shown below.) In each case, make adjustments so that the screen position is uniformly arranged to the top, bottom, right, and left. Confirm that both [H PHA] and [H CLK] are set at 0. Otherwise, press the cursor keys [<] and [>] in order to adjust both to zero.
- 480 i, 576 i, 480P, 576P [NORMAL → FULL → STANDIUM → SOOM → U-SCAN]
- 1080 i, 1035 i, 720P [FULL → U-SCAN]

(12) Withdraw the factory setting mode.

[Morgue]

1. Signal Generator

(1) Digital RGB and component signal generator
- Equivalent to the Video Generator LT1615 (made by LEADER)
- Equivalent to the Panel Adapter LT9217 (made by LEADER)
- Equivalent to the Video Encoder LT1606 (made by LEADER)

(2) NTSC signal generator
- Equivalent to the NTSC Pattern Generator LCG-403YC (made by LEADER)

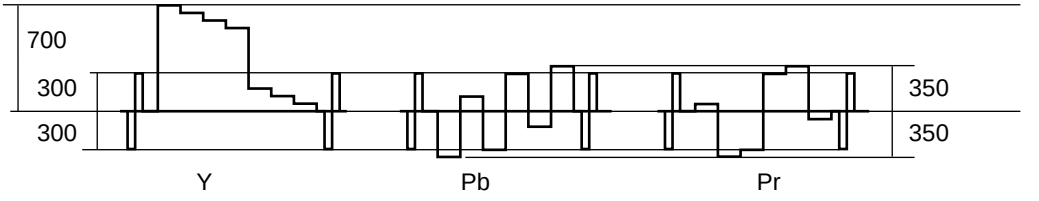
(3) PAL signal generator
- Equivalent to the Color Bar Pattern Generator PM5518 (made by PHILIPS)

2. VIDEO input

Input: Composite video input or S-terminal input for one system

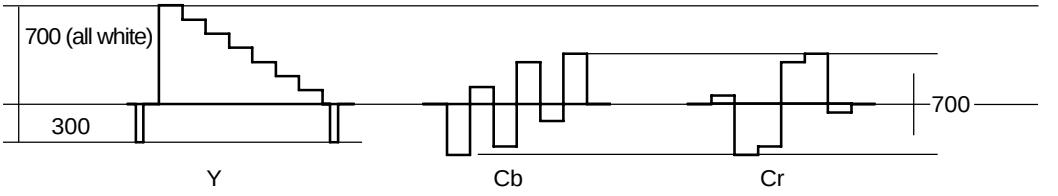
3. DVD/HD/DTV input

3-1. HD: Y/Pb/Pr component input, tri-sync signal



100% color bar signal (mVp-p)

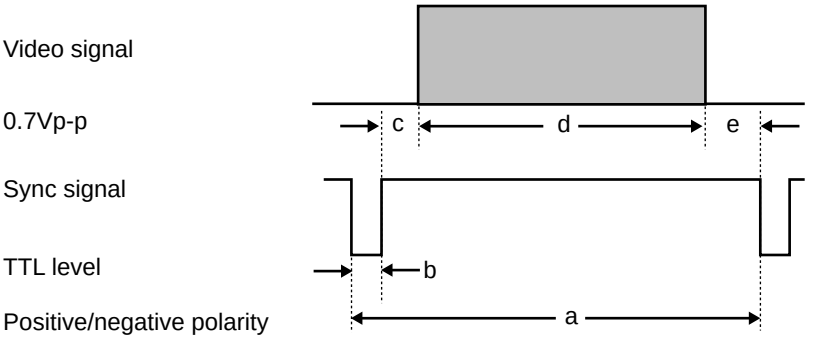
3-2. DVD: Y/B-Y/R-Y component input



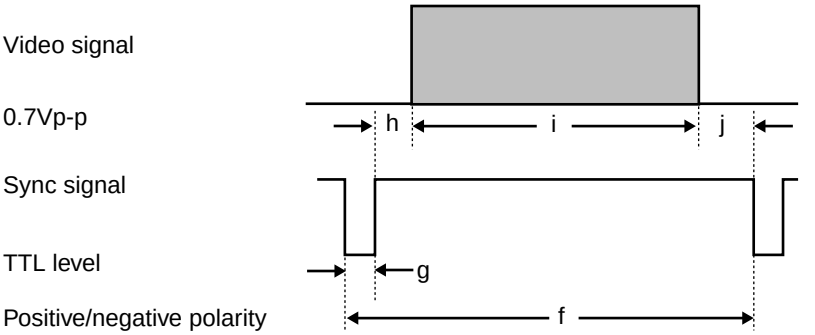
75% color bar signal (mVp-p)

4. RGB/PC input

1) Horizontal sync period



(2) Vertical sync period



* The data a to j above are specified in the next page and thereafter, classified for various inspection signals.

5. RGB/PC signal timing table

PC mode	1	2	3	4	5
Signal name	VU-6010 NTSC	VU-6010 PAL/SECAM	PC98 400@56Hz	IBM 400@70Hz	PC98 480@60HZ
Definition	640*240	768*288	640*400	640*400	640*480
Dot clock frequency (MHz)	12.214	14.752	21.053	25.175	25.175
H frequency (kHz)	15.734	15.557	24.826	31.469	31.469
V frequency (Hz)	59.94	50.39	56.423	70.086	59.94
H total (uS)	63.534	64.262	40.285	31.778	31.778
(dots)	776	948	848	800	800
H display period (uS)	52.4	52.06	30.4	25.422	25.422
(dots)	640	768	640	640	640
H front porch (uS)	1.146	1.288	2.803	0.675	0.596
(dots)	14	19	59	17	15
H sync pulse width (uS)	8.76	8.677	3.04	2.542	3.813
(dots)	107	128	64	64	96
H back porch (uS)	1.228	2.237	4.037	3.138	1.946
(dots)	15	33	85	79	49
V total (mS)	16.652	20.055	17.723	14.268	16.683
(line)	262	312	440	449	525
V display period (mS)	15.3	18.513	16.112	12.711	15.253
(line)	240	288	400	400	480
V front porch (mS)	0.191	0.321	0.282	0.413	0.191
(line)	3	5	7	13	6
V sync pulse width (mS)	1.144	1.093	0.322	0.064	0.064
(line)	18	17	8	2	2
V back porch (mS)	0.064	0.064	1.007	1.08	1.176
(line)	1	1	25	34	37
H sync polarity	Neg	Neg	Neg	Neg	Neg
V sync polarity	Neg	Neg	Neg	Neg	Neg
Scan type	Interlaced	Interlaced	Non Interlaced	Non Interlaced	Non Interlaced

PC mode	6	7	8	9	10
Signal name	MAC@13”	VESA 480@72Hz	VESA 480@75Hz	VESA 480@85Hz	XGA-2 480@75HZ
Definition	640*480	640*480	640*480	640*480	640*480
Dot clock frequency (MHz)	30.24	31.5	31.5	36.0	31.5
H frequency (kHz)	35	37.861	37.5	43.269	39.375
V frequency (Hz)	66.667	72.809	75	85.008	75
H total (uS)	28.571	26.413	26.667	23.111	25.4
(dots)	864	832	840	832	800
H display period (uS)	21.164	20.317	20.317	17.778	20.32
(dots)	640	640	640	640	640
H front porch (uS)	2.116	0.762	0.508	1.556	0.508
(dots)	64	24	16	56	16
H sync pulse width (uS)	2.116	1.27	2.032	1.556	3.048
(dots)	64	40	64	56	96
H back porch (uS)	3.175	4.064	3.81	2.222	1.524
(dots)	96	128	120	80	48
V total (mS)	15	13.735	13.333	11.764	13.333
(line)	525	520	500	509	525
V display period (mS)	13.714	12.678	12.8	11.093	12.19
(line)	480	480	480	480	480
V front porch (mS)	0.086	0.237	0.027	0.023	0.279
(line)	3	9	1	1	11
V sync pulse width (mS)	0.086	0.079	0.08	0.069	0.051
(line)	3	3	3	3	2
V back porch (mS)	1.114	0.739	0.427	0.578	0.813
(line)	39	28	16	25	32
H sync polarity	Sync on G	Neg	Neg	Neg	Neg
V sync polarity	Sync on G	Neg	Neg	Neg	Neg
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced

PC mode	11	12	13	14	15
Signal name	VESA 600@56Hz	VESA 600@60Hz	VESA 600@72Hz	VESA 600@75Hz	VESA 600@85Hz
Definition	800*600	800*600	800*600	800*600	800*600
Dot clock frequency (MHz)	36	40	50	49.5	56.25
H frequency (kHz)	35.156	37.879	48.077	46.875	53.674
V frequency (Hz)	56.25	60.317	72.188	75	85.061
H total (uS)	28.444	26.4	20.8	21.333	18.631
(dots)	1024	1056	1040	1056	1048
H display period (uS)	22.222	20	16	16.162	14.222
(dots)	800	800	800	800	800
H front porch (uS)	0.667	1	1.12	0.323	0.569
(dots)	24	40	56	16	32
H sync pulse width (uS)	2	3.2	2.4	1.616	1.138
(dots)	72	128	120	80	64
H back porch (uS)	3.556	2.2	1.28	3.232	2.702
(dots)	128	88	64	160	152
V total (mS)	17.778	16.579	13.853	13.333	11.756
(line)	625	628	666	625	631
V display period (mS)	17.067	15.84	12.48	12.8	11.179
(line)	600	600	600	600	600
V front porch (mS)	0.028	0.026	0.77	0.021	0.019
(line)	1	1	37	1	1
V sync pulse width (mS)	0.057	0.106	0.125	0.064	0.056
(line)	2	4	6	3	3
V back porch (mS)	0.626	0.607	0.478	0.448	0.503
(line)	22	23	23	21	27
H sync polarity	Pos.	Pos.	Pos.	Pos.	Pos.
V sync polarity	Pos.	Pos.	Pos.	Pos.	Pos.
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced

PC mode	16	17	18	19	20
Signal name	MAC@16”	I/O dater wide	CEREB wide 1	VESA wide (NEC 1)	VESA wide (NEC 2)
Definition	832*624	852*480	864*480	848*480	1024*576
Dot clock frequency (MHz)	57.2832	34.006	42.526	33.75	47.25
H frequency (kHz)	49.725	31.722	37.5	31.02	35.795
V frequency (Hz)	74.55	59.966	75	60	60.059
H total (uS)	20.111	31.524	26.667	32.237	27.937
(dots)	1152	1072	1134	1088	1320
H display period (uS)	14.524	25.055	20.317	25.126	21.672
(dots)	832	852	864	848	1024
H front porch (uS)	0.559	0.659	0.508	0.474	0.339
(dots)	32	22	22	16	16
H sync pulse width (uS)	1.117	3.764	2.032	3.319	3.048
(dots)	64	128	86	112	144
H back porch (uS)	3.91	2.047	3.81	3.319	2.878
(dots)	224	70	162	112	136
V total (mS)	13.414	16.676	13.333	16.667	16.65
(line)	667	529	500	517	596
V display period (mS)	12.549	15.132	12.8	15.474	16.091
(line)	624	480	480	480	576
V front porch (mS)	0.02	0.378	0.027	0.193	0.056
(line)	1	12	1	6	2
V sync pulse width (mS)	0.06	0.095	0.08	0.258	0.112
(line)	3	3	3	8	4
V back porch (mS)	0.784	1.072	0.427	0.741	0.391
(line)	39	34	16	23	14
H sync polarity	Sync on G	Neg	Pos.	Pos.	Pos.
V sync polarity	Sync on G	Neg	Neg	Pos.	Pos.
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced

PC mode	21	22	23	24	25
Signal name	VESA wide (NEC 3)	VESA wide (NEC 4)	CEREB wide 2	VESA 768@60Hz	VESA 768@70Hz
Definition	1280*720	1360*768	1024*600	1024*768	1024*768
Dot clock frequency (MHz)	76.5	85.5	51.2	65	75
H frequency (kHz)	45.106	47.712	37.879	48.363	56.476
V frequency (Hz)	60.142	60.015	60.317	60.004	70.069
H total (uS)	22.17	20.959	26.4	20.677	17.707
(dots)	1696	1792	1352	1344	1328
H display period (uS)	16.732	15.906	20	15.754	13.653
(dots)	1280	1360	1024	1024	1024
H front porch (uS)	0.627	0.749	1	0.369	0.32
(dots)	48	64	51	24	24
H sync pulse width (uS)	2.301	1.310	3.2	2.092	1.813
(dots)	176	112	164	136	136
H back porch (uS)	2.51	2.994	2.2	2.462	1.92
(dots)	192	256	113	160	144
V total (mS)	16.627	16.662	15.579	16.666	14.272
(line)	750	795	628	806	806
V display period (mS)	15.962	16.097	15.84	15.88	13.599
(line)	720	768	600	768	768
V front porch (mS)	0.089	0.063	0.026	0.062	0.053
(line)	4	3	1	3	3
V sync pulse width (mS)	0.177	0.126	0.106	0.124	0.106
(line)	8	6	4	6	6
V back porch (mS)	0.399	0.377	0.607	0.6	0.513
(line)	18	18	23	29	29
H sync polarity	Pos.	Pos.	Neg	Neg.	Neg.
V sync polarity	Pos.	Pos.	Pos.	Neg.	Neg.
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced

PC mode	26	27	28	29	30
Signal name	VESA 768@75Hz	VESA 768@85Hz	MAC@19”	VESA 1024@60Hz	VESA 1024@75Hz
Definition	1024*768	1024*768	1024*768	1280*1024	1280*1024
Dot clock frequency (MHz)	78.75	94.5	80	108	135
H frequency (kHz)	60.023	68.677	60.24	63.981	79.976
V frequency (Hz)	75.029	84.997	74.93	60.02	75.025
H total (uS)	16.66	14.561	16.600	15.63	12.501
(dots)	1312	1376	1328	1688	1688
H display period (uS)	13	10.836	12.8	11.852	9.481
(dots)	1024	1024	1024	1280	1280
H front porch (uS)	0.203	0.508	0.4	0.444	0.119
(dots)	16	48	32	48	2
H sync pulse width (uS)	1.219	1.016	1.2	1.037	1.067
(dots)	96	96	96	112	144
H back porch (uS)	2.235	2.201	2.2	2.296	1.837
(dots)	176	208	176	248	248
V total (mS)	13.328	11.765	13.347	16.661	13.329
(line)	800	808	804	1066	1066
V display period (mS)	12.795	11.183	12.749	16.005	12.804
(line)	768	768	768	1024	1024
V front porch (mS)	0.017	0.015	0.050	0.016	0.013
(line)	1	1	3	1	1
V sync pulse width (mS)	0.05	0.044	0.050	0.047	0.038
(line)	3	3	3	3	3
V back porch (mS)	0.466	0.524	0.498	0.594	0.475
(line)	28	36	30	38	38
H sync polarity	Pos.	Pos.	—	Pos.	Pos.
V sync polarity	Pos.	Pos.	—	Pos.	Pos.
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced

PC mode	31	32	33	34	35
Signal name	IDC-3000G PAL 625P	IDC-3000G NTSC 525P	HDTV-J	DTV (480P)	DTV (720P)
Definition	768*576	640*480	1920*1034	644*483	1280*720
Dot clock frequency (MHz)	29.687	24.39	74.25	24.37	74.25
H frequency (kHz)	31.389	31.47	33.75	31.469	45.000
V frequency (Hz)	50	59.9	60/60	59.94	60
H total (uS)	31.933	31.775	29.63	31.777	22.222
(dots)	948	775	2200	774	1650
H display period (uS)	25.87	26.24	25.86	26.427	17.239
(dots)	768	640	1920	644	1280
H front porch (uS)	0.269	0.41	0.59	0.75	0.943
(dots)	8	10	44	18	70
H sync pulse width (uS)	2.526	2.46	0.59	2.35	1.077
(dots)	75	60	44	57	80
H back porch (uS)	3.267	2.665	2.59	2.25	2.963
(dots)	97	65	192	55	220
V total (mS)	19.911	16.522	16.652	16.683	16.667
(line)	625	525	562/562	525	750
V display period (mS)	18.35	15.106	15.319	15.348	
(line)	576	480	517/517	483	720
V front porch (mS)	0.223	0.252	0.148	0.191	0.111
(line)	7	8	5	6	5
V sync pulse width (mS)	0.223	0.22	0.148	0.191	0.111
(line)	7	7	5	6	5
V back porch (mS)	1.115	0.944	1.037	0.953	0.444
(line)	35	30	35	30	20
H sync polarity	Neg	Neg	Neg	Neg	Neg
V sync polarity	Neg	Neg	Neg	Neg	Neg
Scan type	Non Interlaced	Non Iinterlaced	Interlaced	Non Interlaced	Non Interlaced

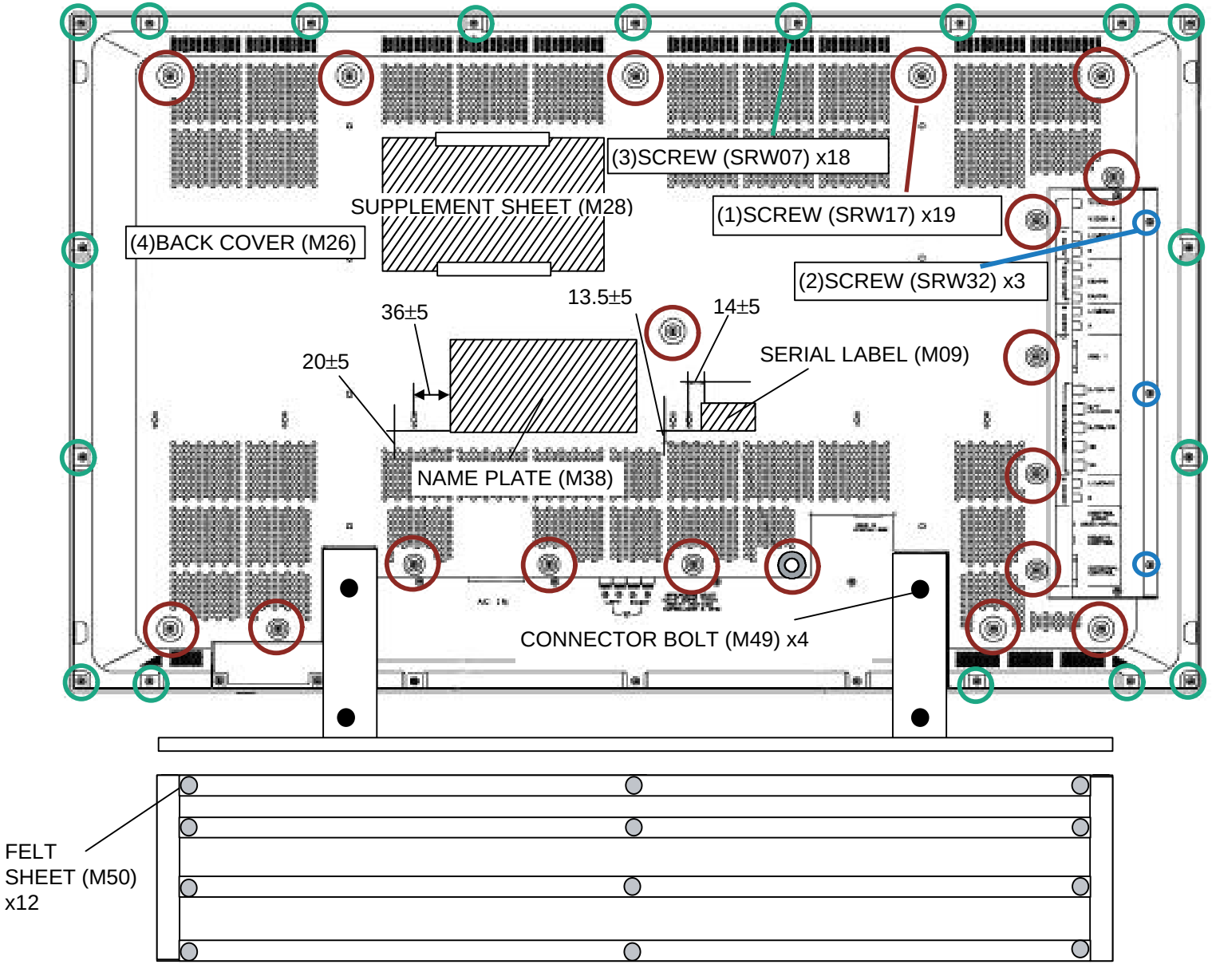
PC mode	36	37	38	39
Signal name	HDTV-W	SSPE	JSPE	MAC@12”
Definition	1920*1080	1024*512	852*480	1152*870
Dot clock frequency (MHz)	74.25	40	16	100
H frequency (kHz)	33.75	33.727	15.75	68.681
V frequency (Hz)	60/60	60.012	59.94	75.062
H total (uS)	29.630	29.650	63.750	14.560
(dots)	2200	1186	1020	1456
H display period (uS)	25.859	25.600	53.250	11.520
(dots)	1920	1024	852	1152
H front porch (uS)	0.593	0.600	1.250	0.320
(dots)	44	24	20	32
H sync pulse width (uS)	1.185	1.200	4.750	1.280
(dots)	88	48	76	128
H back porch (uS)	1.993	2.250	4.500	1.440
(dots)	148	90	72	144
V total (mS)	16.652/16.682	16.663	16.683	13.322
(line)	562/563	562	262.5/262.5	915
V display period (mS)	16.000/16.000	15.15	15.236/15.236	12.667
(line)	540/540	511	239/239	870
V front porch (mS)	0.059/0.074	0.178	0.064/0.096	0.044
(line)	2/2.5	6	1/1.5	3
V sync pulse width (mS)	0.148/0.148	0.148	0.191/0.191	0.044
(line)	5/5	5	3/3	3
V back porch (mS)	0.444/0.459	1.186	1.211/1.243	0.568
(line)	15/15.5	40	19/19.5	39
H sync polarity	Neg	Neg	Neg	Sync on G
V sync polarity	Neg	Neg	Neg	Sync on G
Scan type	Interlaced	Non Interlaced	Interlaced	Non Interlaced

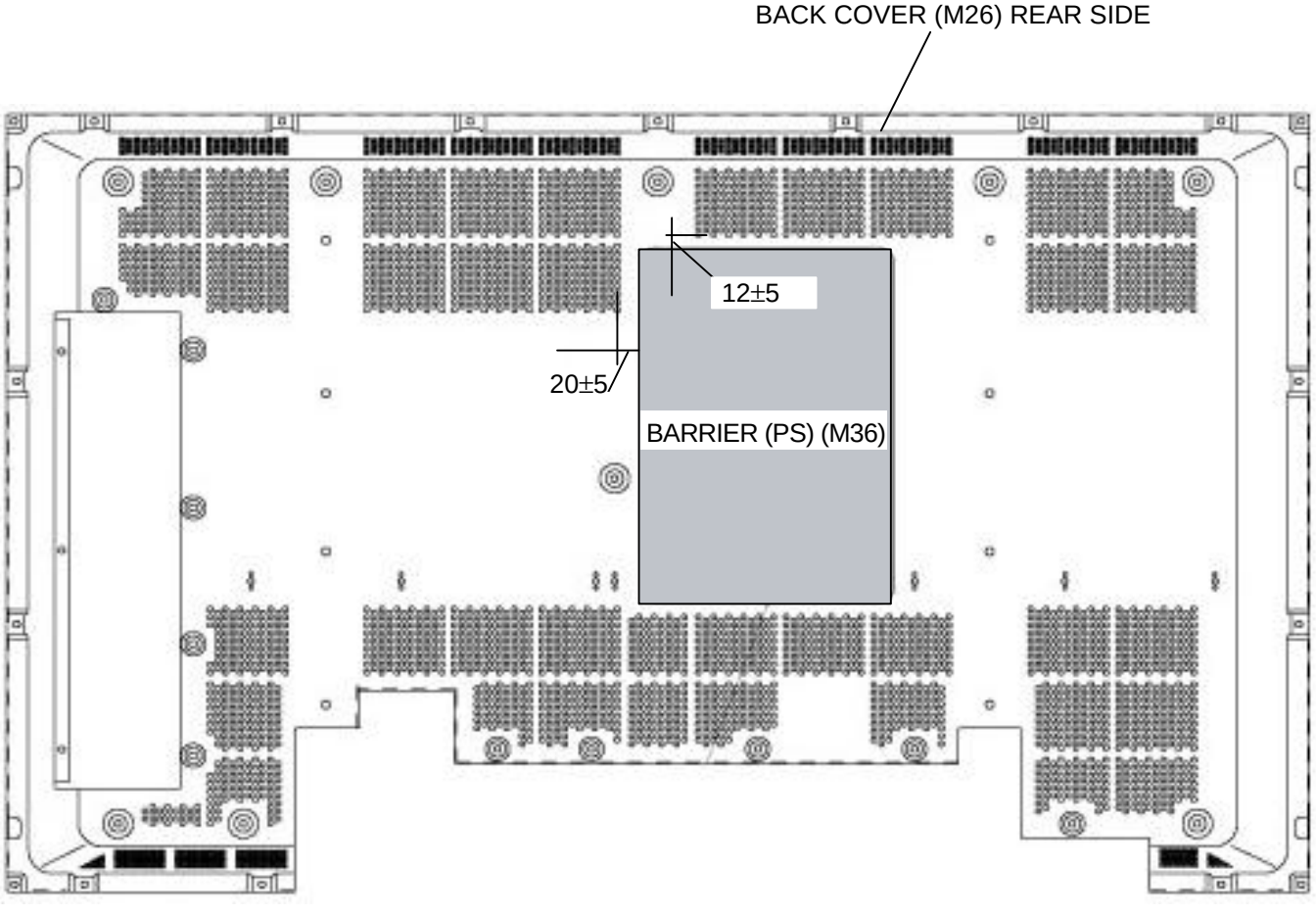
METHOD OF DISASSEMBLY

(Cautions)

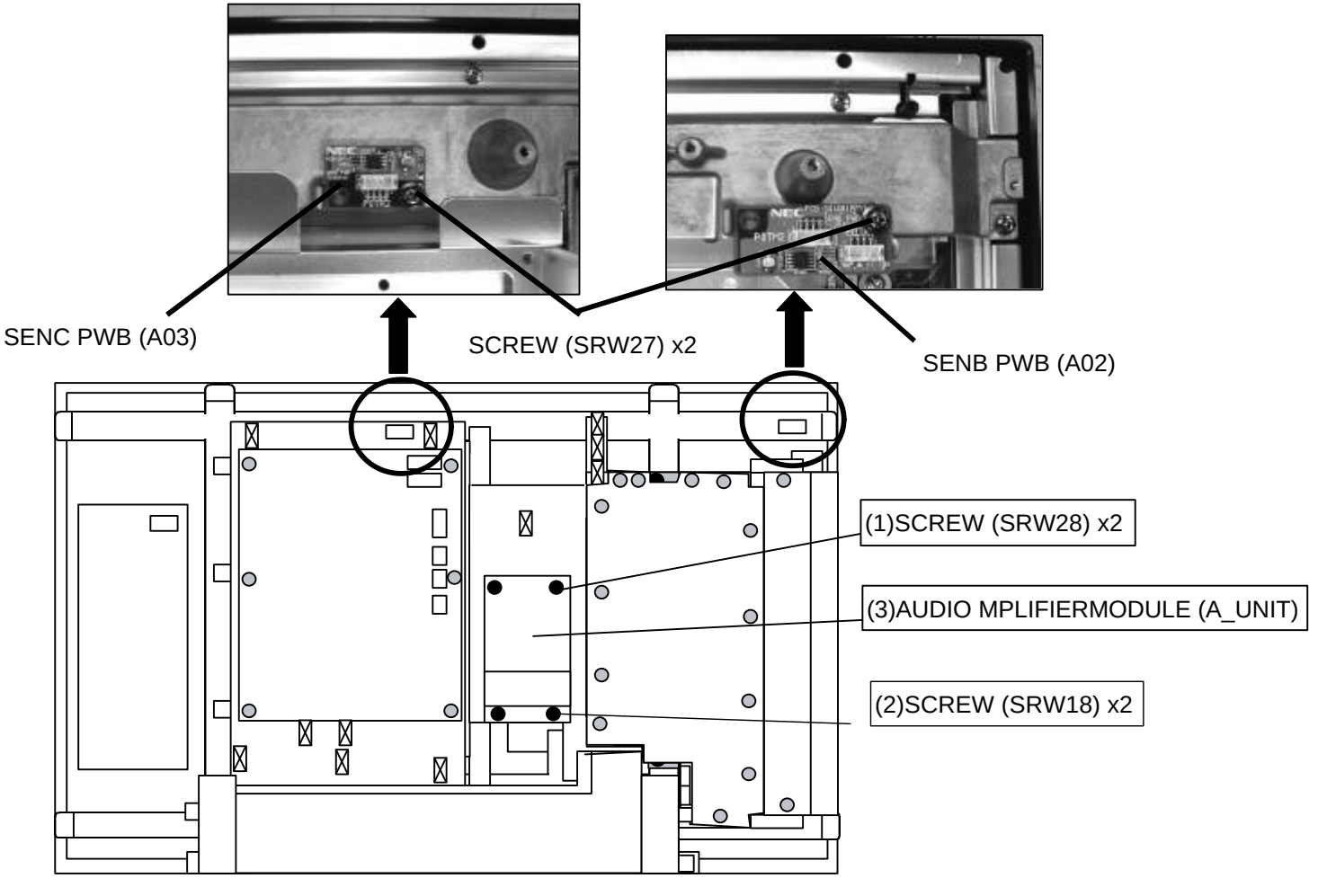
1. Before disassembly, turn power off the main unit and pull out the power plug from the wall outlet.
2. Use a screwdriver with a fitting size. Otherwise, the screw threads may be damaged.
3. Reassembly can be carried out in the reverse order for disassembly. Refer to the disassembly procedures and forward reassembly in the reverse order.
4. The order for taking out the parts (or components) is indicated by the foregoing numeral that is attached to the name of each part (or component).
5. The wire connector symbol is indicated by two digits of Marking □ □ . Read CN- □ □ when examining the table of parts.

1. BACK COVER

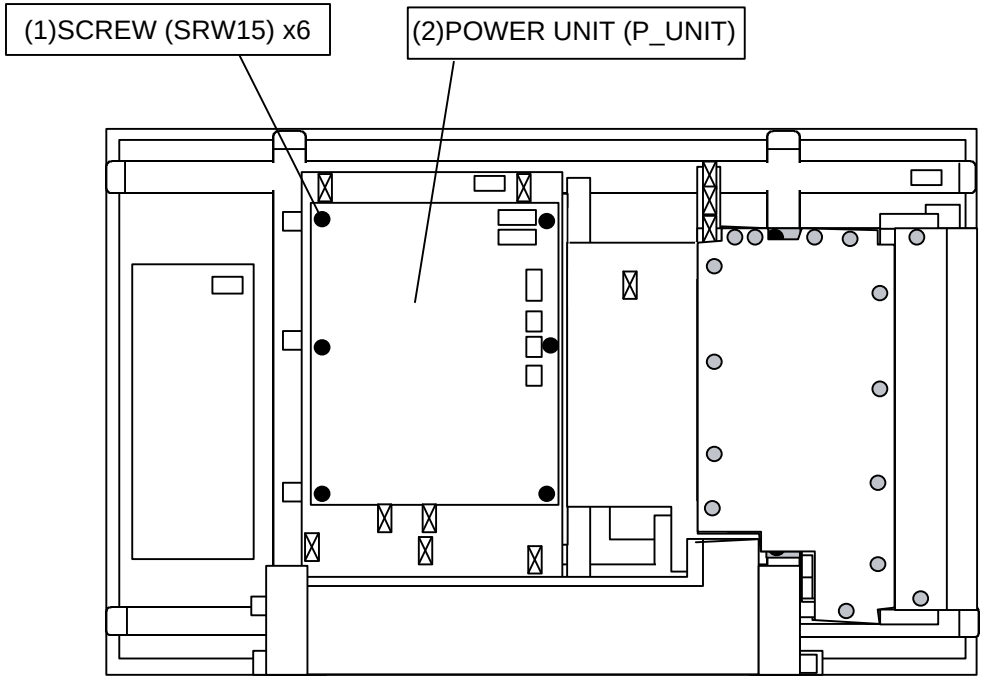

(3)SCREW (SRW07) x18
SUPPLEMENT SHEET (M28)
(1)SCREW (SRW17) x19
(4)BACK COVER (M26)
(2)SCREW (SRW32) x3
13.5±5
14±5
36±5
20±5
SERIAL LABEL (M09)
NAME PLATE (M38)
CONNECTOR BOLT (M49) x4
FELT
SHEET (M50)
x12


BACK COVER (M26) REAR SIDE
12±5
20±5
BARRIER (PS) (M36)

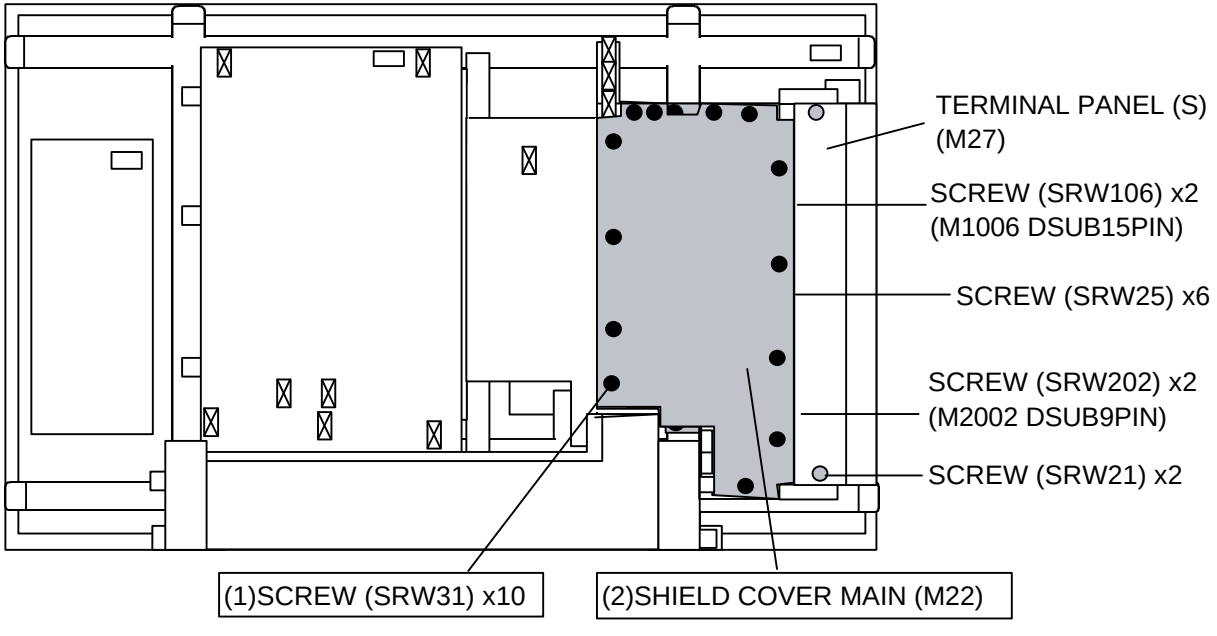
2. AUDIO AMPLIFIER MODULE

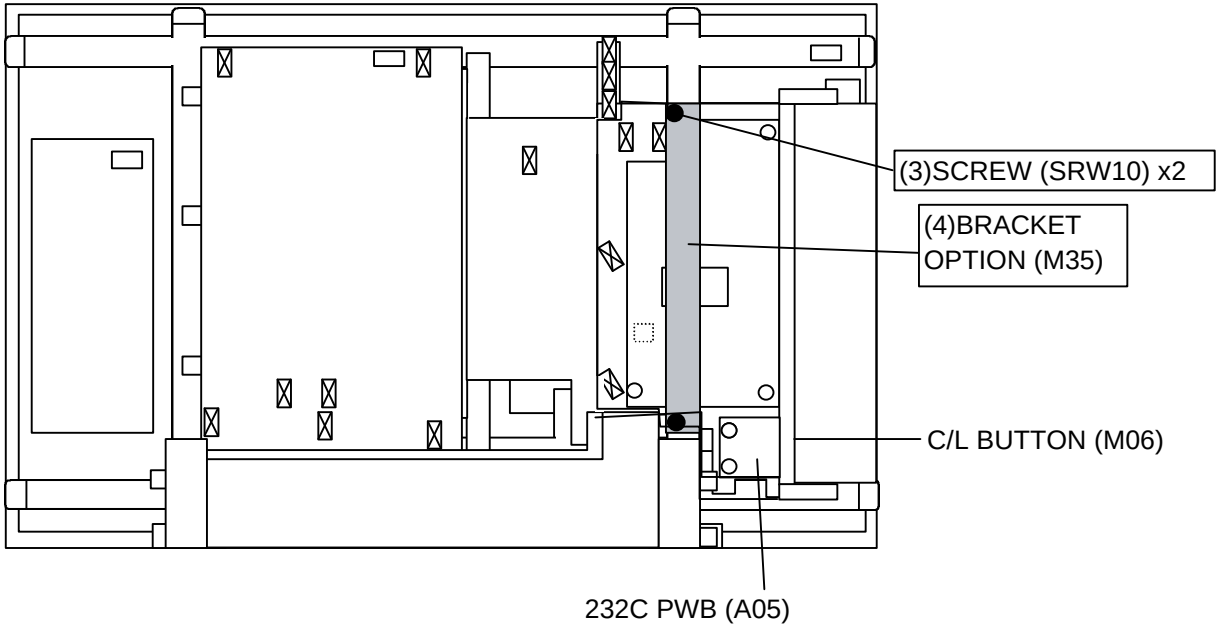


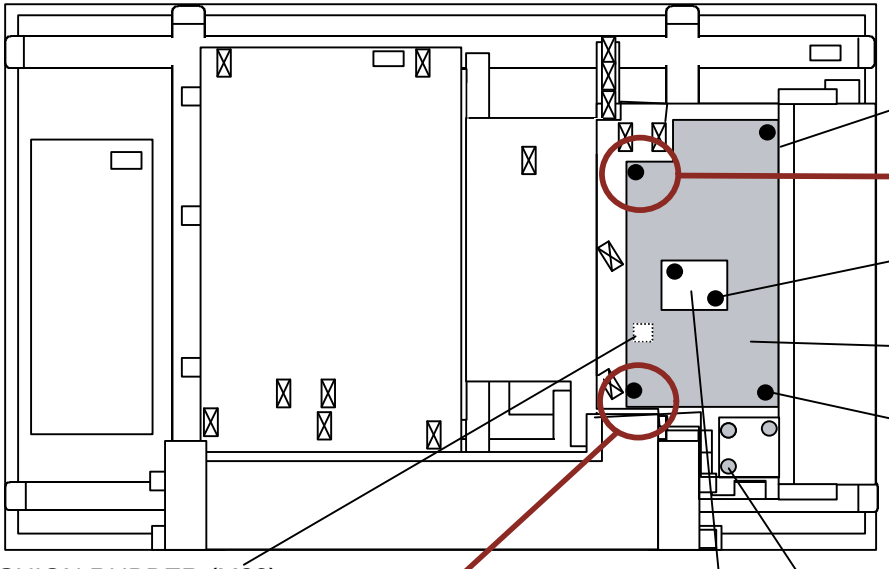
3. POWER UNIT



4. MAIN PWB


TERMINAL PANEL (S)
(M27)
SCREW (SRW106) x2
(M1006 DSUB15PIN)
SCREW (SRW25) x6
SCREW (SRW202) x2
(M2002 DSUB9PIN)
SCREW (SRW21) x2
(1)SCREW (SRW31) x10
(2)SHIELD COVER MAIN (M22)


(3)SCREW (SRW10) x2
(4)BRACKET OPTION (M35)
C/L BUTTON (M06)
232C PWB (A05)



SHIELD PLATE (M33)

(5)SCREW (SRW22) x2

(8)MAIN PWB (A01)

(7)SCREW (SRW22) x4

SCREW (SRW22) x3

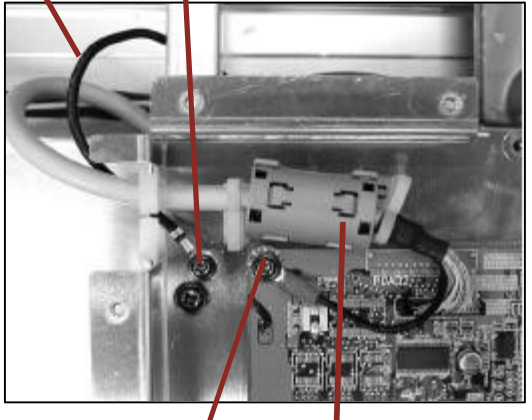
CUSHION RUBBER (M32)

(Caution) To be stuck near the rear side of the PN connector.

SCREW(SRW33)

(Caution) To be tightened together with the round terminal (CN12) extended from the module.

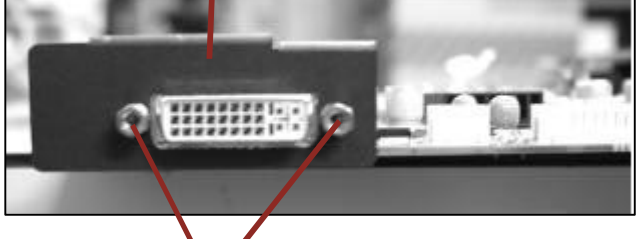
CONNECTOR (CN12)



FERRITE CORE (FL01)

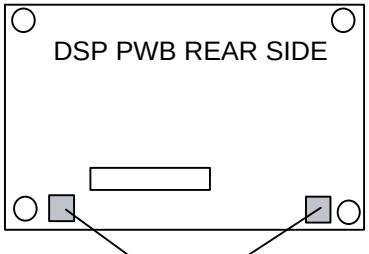
(Caution) To be tightened together with the round terminal of the AD connector (CN-AD).

DVI PANEL (M24)



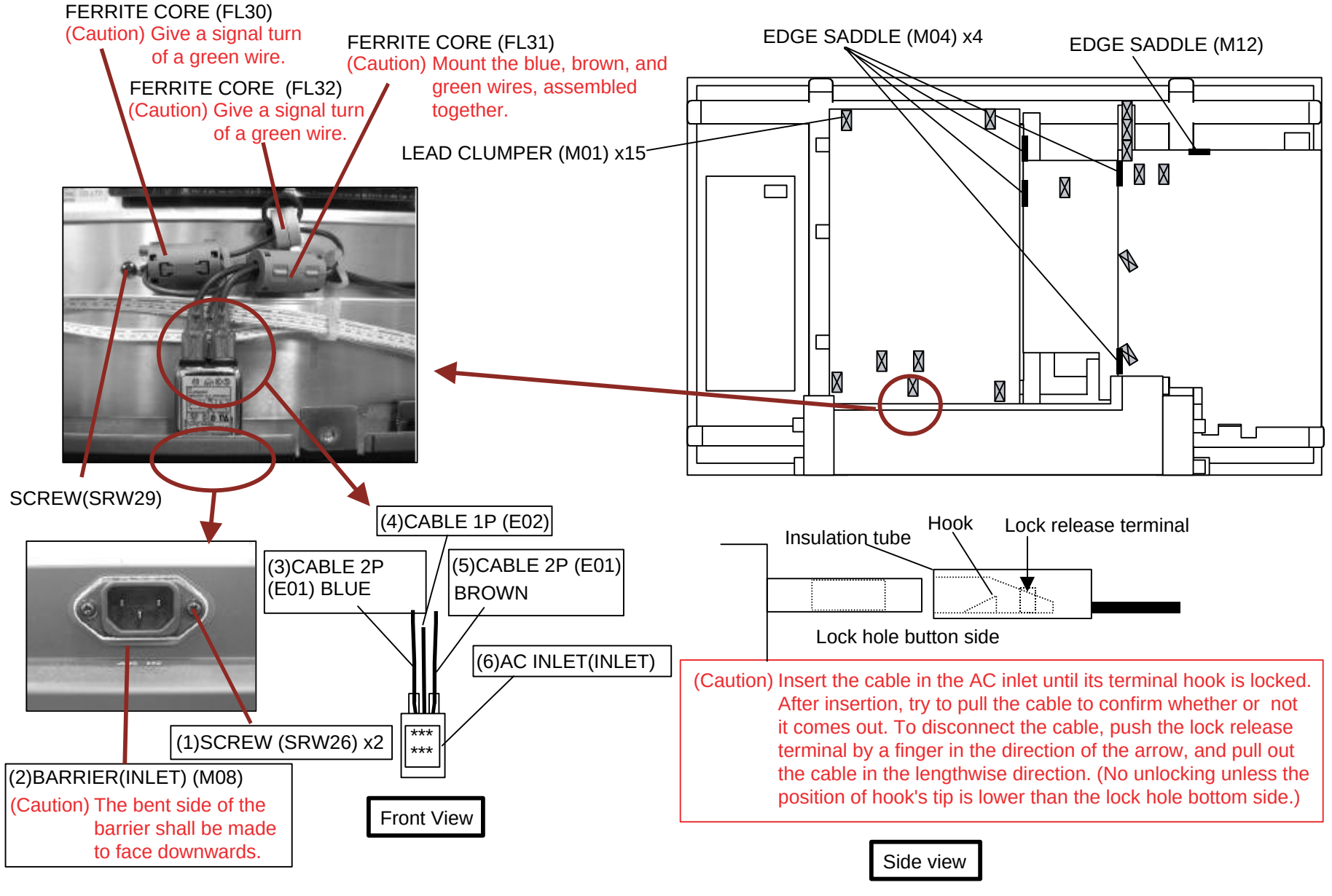
SCREW (SRW241) x2

(6)DSP PWB (A04)

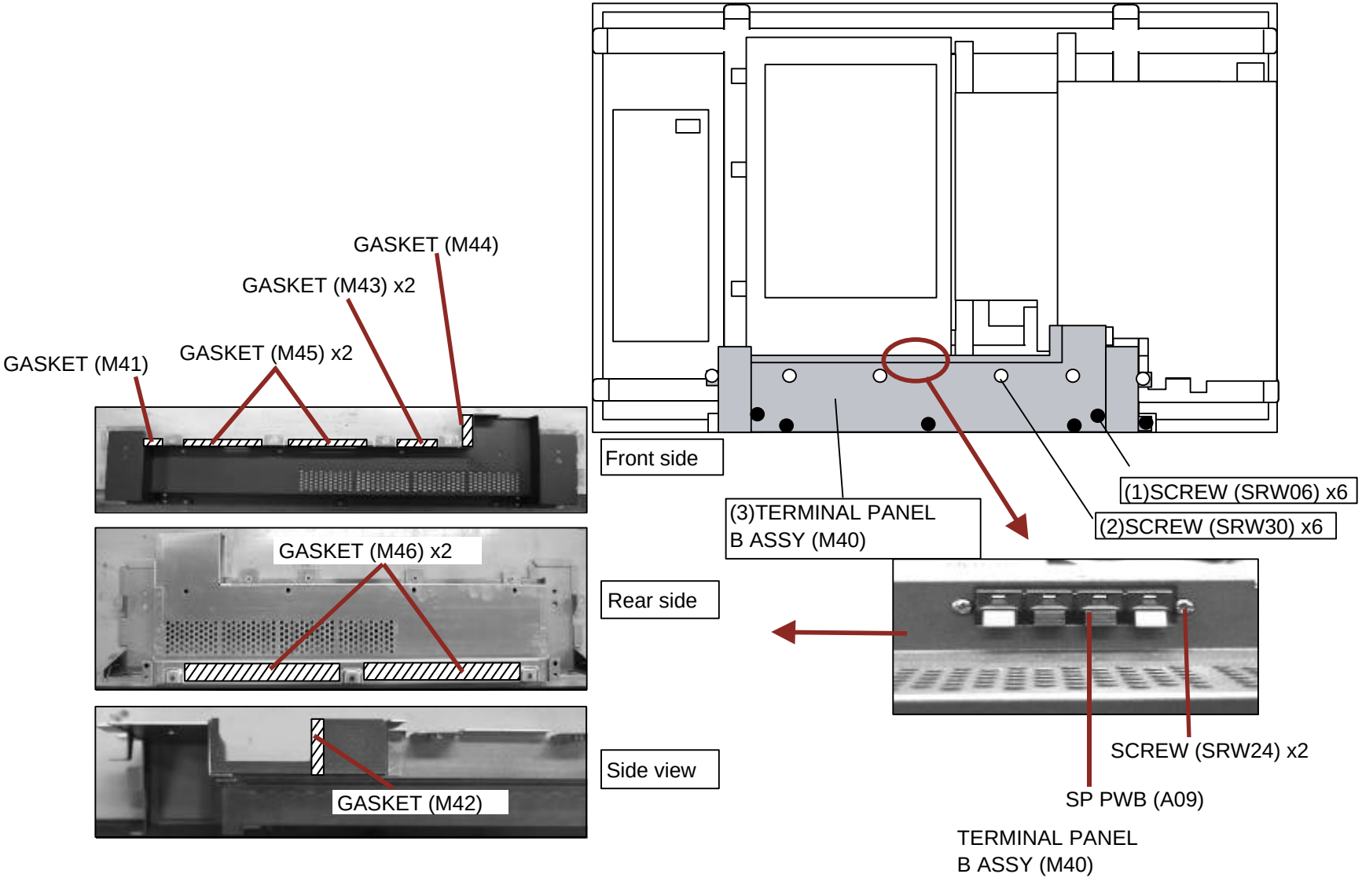


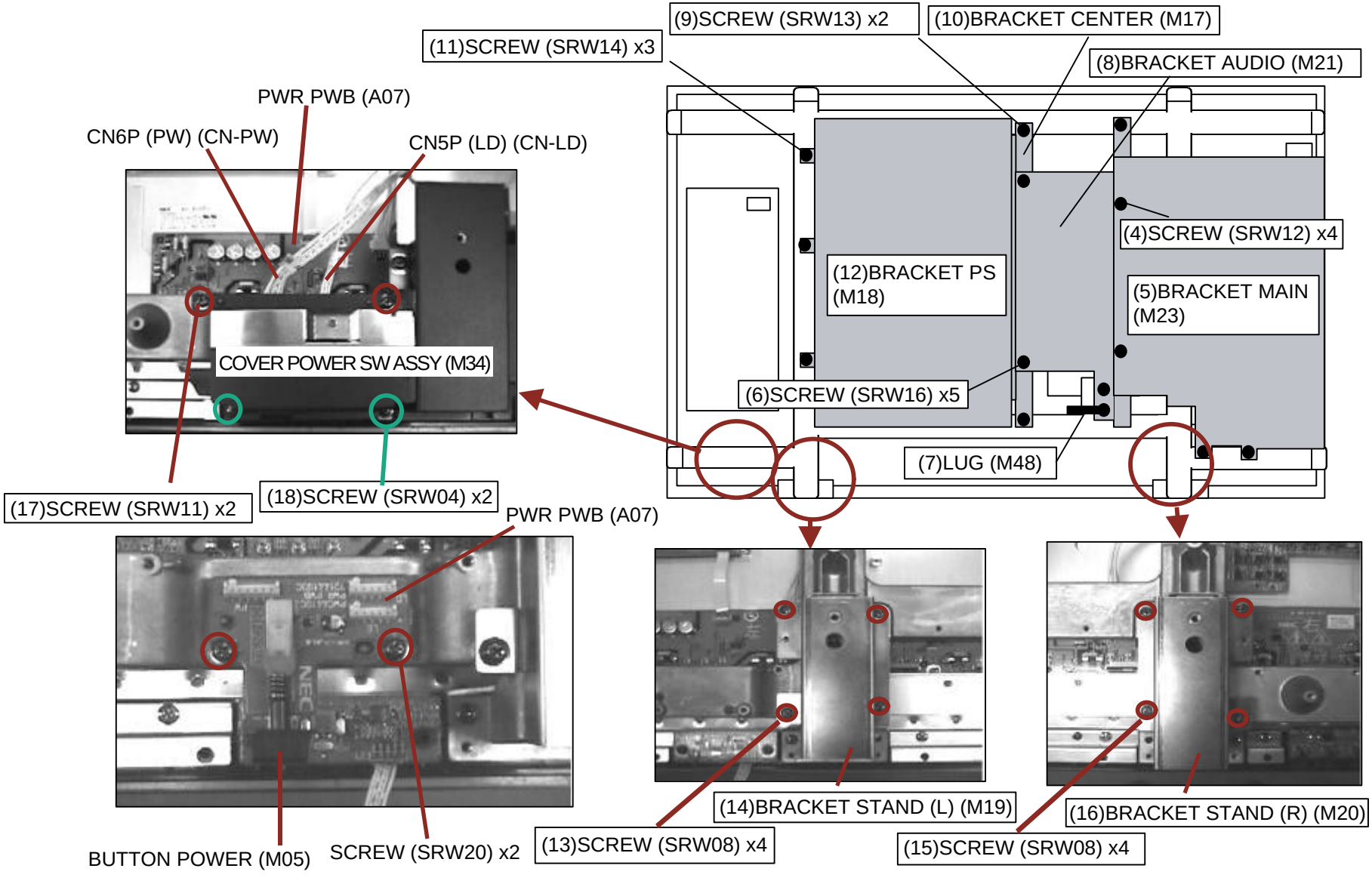
CUSHION RUBBER (M31) x2

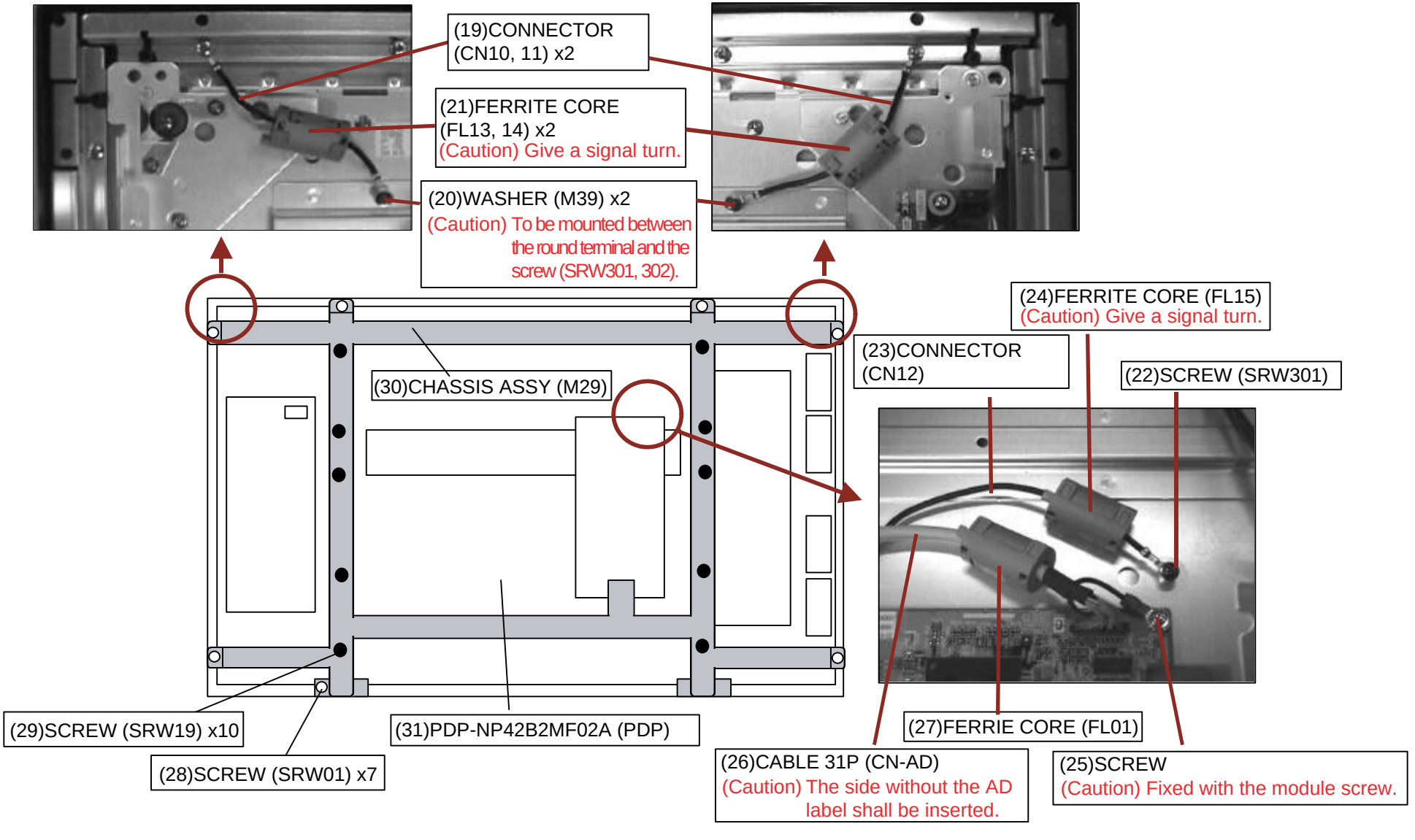
5. AC INLET


FERRITE CORE (FL30)
(Caution) Give a signal turn of a green wire.
FERRITE CORE (FL31)
(Caution) Mount the blue, brown, and green wires, assembled together.
FERRITE CORE (FL32)
(Caution) Give a signal turn of a green wire.
LEAD CLUMPER (M01) x15
EDGE SADDLE (M04) x4
EDGE SADDLE (M12)
SCREW(SRW29)
(4)CABLE 1P (E02)
(3)CABLE 2P (E01) BLUE
(5)CABLE 2P (E01) BROWN
(6)AC INLET(INLET)
(1)SCREW (SRW26) x2
(2)BARRIER(INLET) (M08)
(Caution) The bent side of the barrier shall be made to face downwards.
Front View
Insulation tube
Hook
Lock release terminal
Lock hole button side
(Caution) Insert the cable in the AC inlet until its terminal hook is locked. After insertion, try to pull the cable to confirm whether or not it comes out. To disconnect the cable, push the lock release terminal by a finger in the direction of the arrow, and pull out the cable in the lengthwise direction. (No unlocking unless the position of hook's tip is lower than the lock hole bottom side.)
Side view

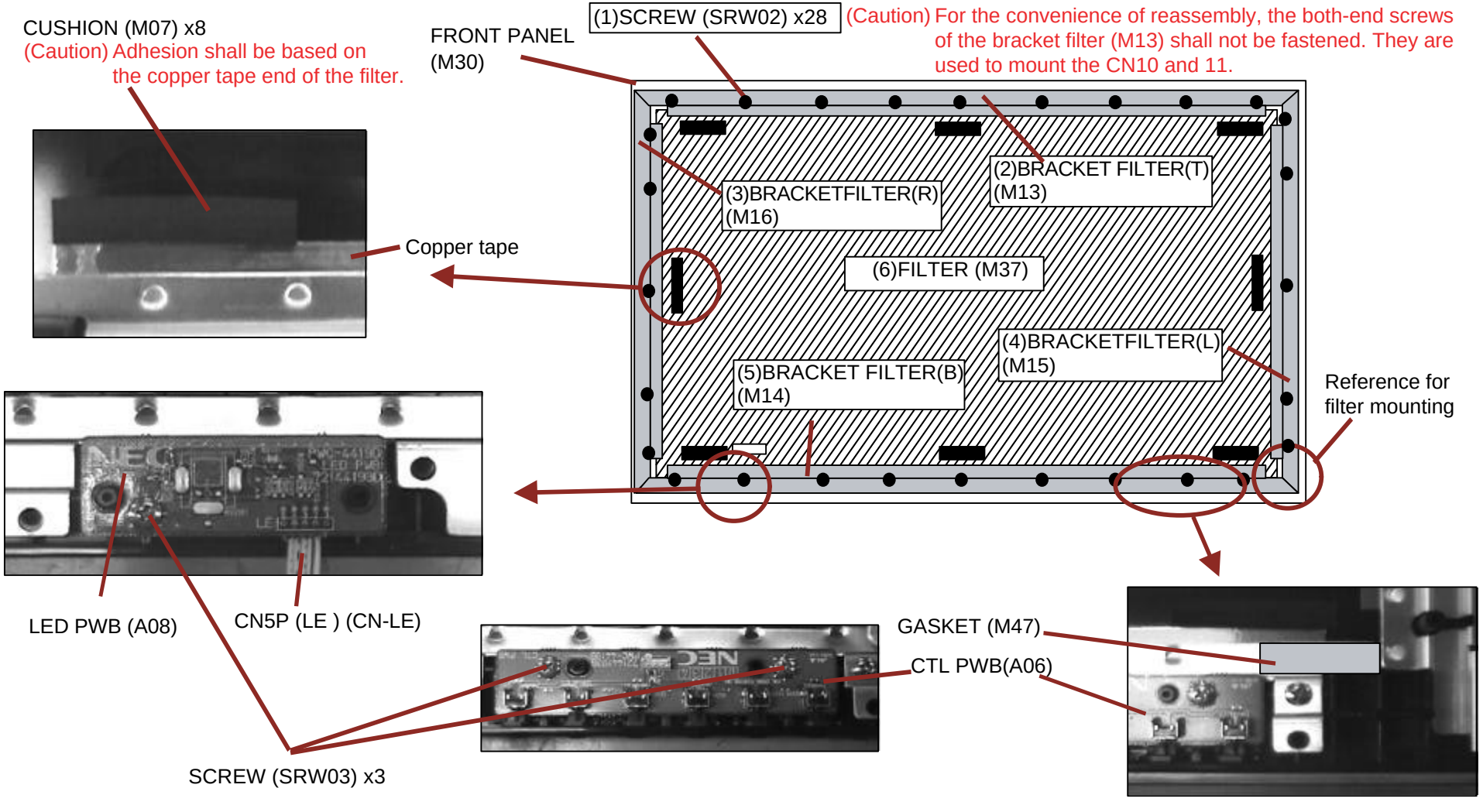
6. PDP MODULE


GASKET (M44)
GASKET (M43) x2
GASKET (M41)
GASKET (M45) x2
GASKET (M46) x2
GASKET (M42)
Front side
Rear side
Side view
(3)TERMINAL PANEL
B ASSY (M40)
(1)SCREW (SRW06) x6
(2)SCREW (SRW30) x6
SCREW (SRW24) x2
SP PWB (A09)
TERMINAL PANEL
B ASSY (M40)

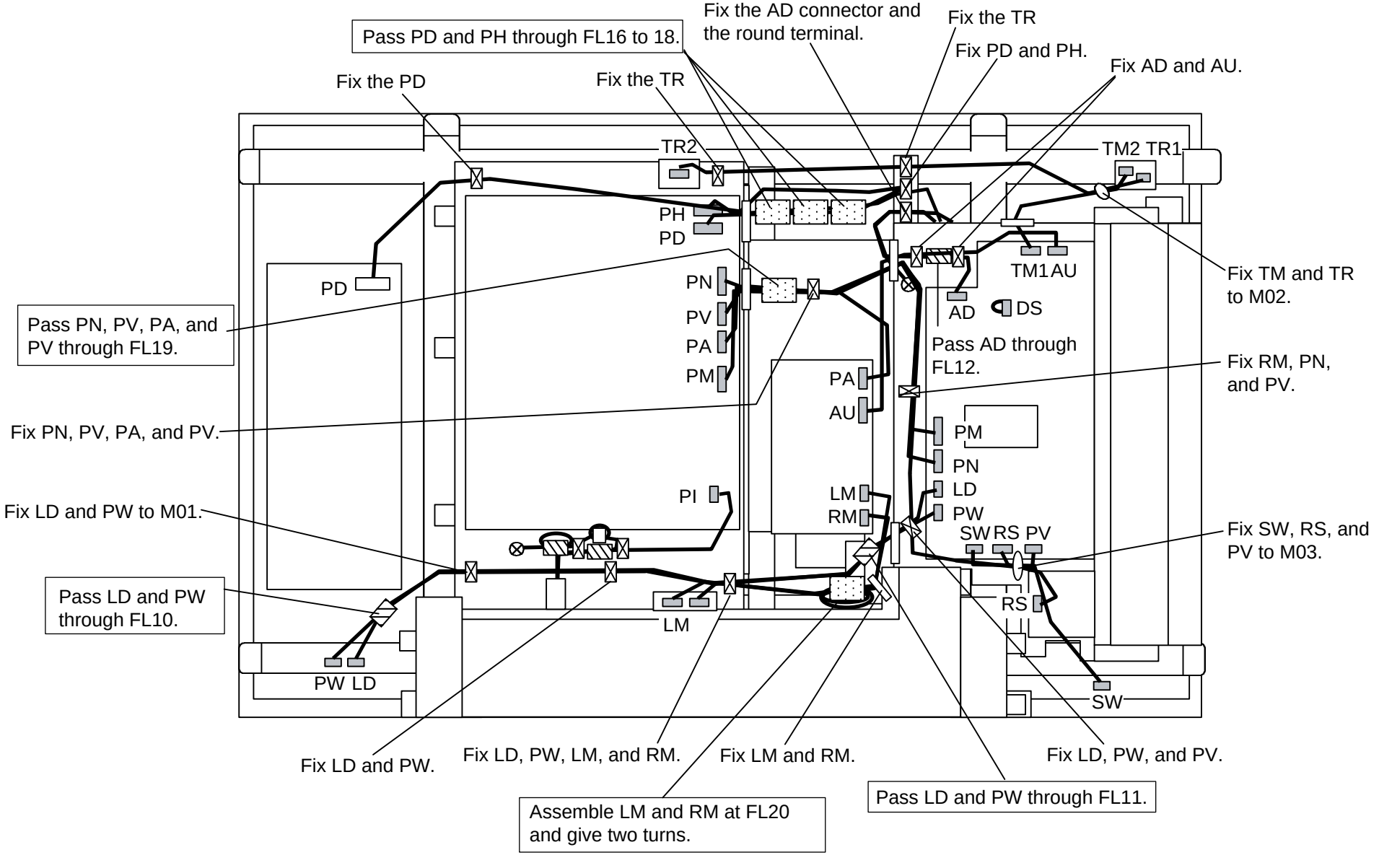

(9)SCREW (SRW13) x2
(10)BRACKET CENTER (M17)
(11)SCREW (SRW14) x3
(8)BRACKET AUDIO (M21)
PWR PWB (A07)
CN6P (PW) (CN-PW)
CN5P (LD) (CN-LD)
(4)SCREW (SRW12) x4
(12)BRACKET PS (M18)
(5)BRACKET MAIN (M23)
COVER POWER SW ASSY (M34)
(6)SCREW (SRW16) x5
(7)LUG (M48)
(17)SCREW (SRW11) x2
(18)SCREW (SRW04) x2
PWR PWB (A07)
(14)BRACKET STAND (L) (M19)
(16)BRACKET STAND (R) (M20)
(13)SCREW (SRW08) x4
(15)SCREW (SRW08) x4
BUTTON POWER (M05)
SCREW (SRW20) x2


(19)CONNECTOR
(CN10, 11) x2
(21)FERRITE CORE
(FL13, 14) x2
(Caution) Give a signal turn.
(20)WASHER (M39) x2
(Caution) To be mounted between the round terminal and the screw (SRW301, 302).
(30)CHASSIS ASSY (M29)
(24)FERRITE CORE (FL15)
(Caution) Give a signal turn.
(23)CONNECTOR
(CN12)
(22)SCREW (SRW301)
(29)SCREW (SRW19) x10
(28)SCREW (SRW01) x7
(31)PDP-NP42B2MF02A (PDP)
(27)FERRIE CORE (FL01)
(26)CABLE 31P (CN-AD)
(Caution) The side without the AD label shall be inserted.
(25)SCREW
(Caution) Fixed with the module screw.

7. FILTER

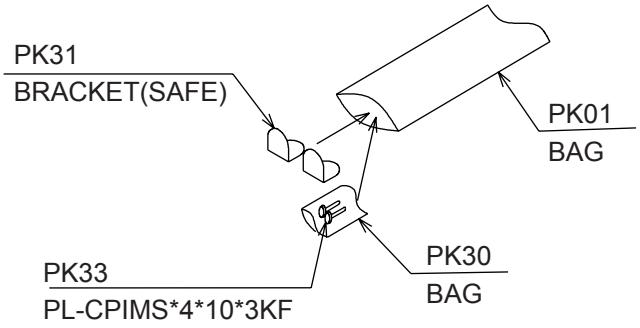

CUSHION (M07) x8
(Caution) Adhesion shall be based on the copper tape end of the filter.
FRONT PANEL (M30)
(1)SCREW (SRW02) x28
(Caution) For the convenience of reassembly, the both-end screws of the bracket filter (M13) shall not be fastened. They are used to mount the CN10 and 11.
(2)BRACKET FILTER(T) (M13)
(3)BRACKETFILTER(R) (M16)
Copper tape
(6)FILTER (M37)
(4)BRACKETFILTER(L) (M15)
(5)BRACKET FILTER(B) (M14)
Reference for filter mounting
LED PWB (A08)
CN5P (LE) (CN-LE)
GASKET (M47)
CTL PWB(A06)
SCREW (SRW03) x3

WIRING PROCEDURES

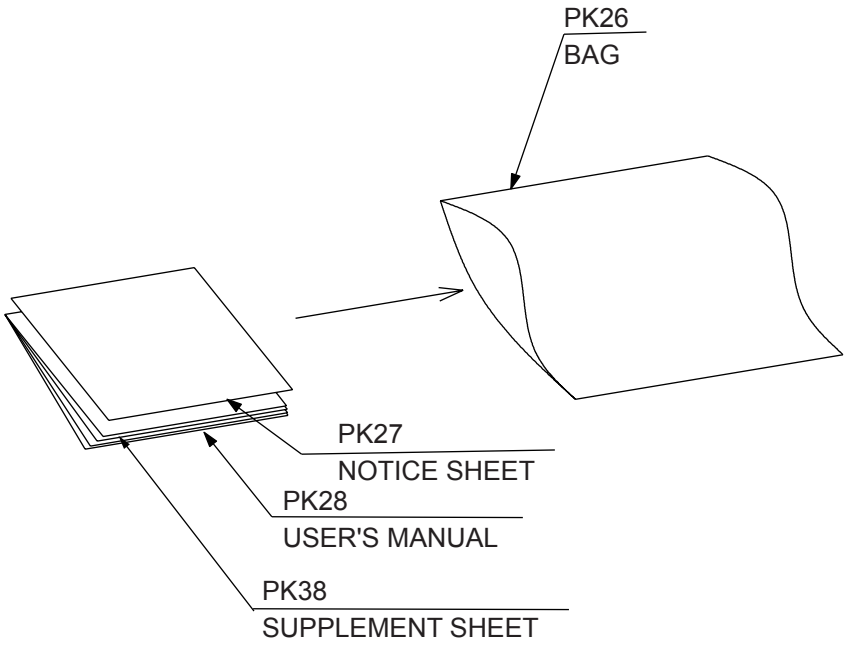


PACKAGING

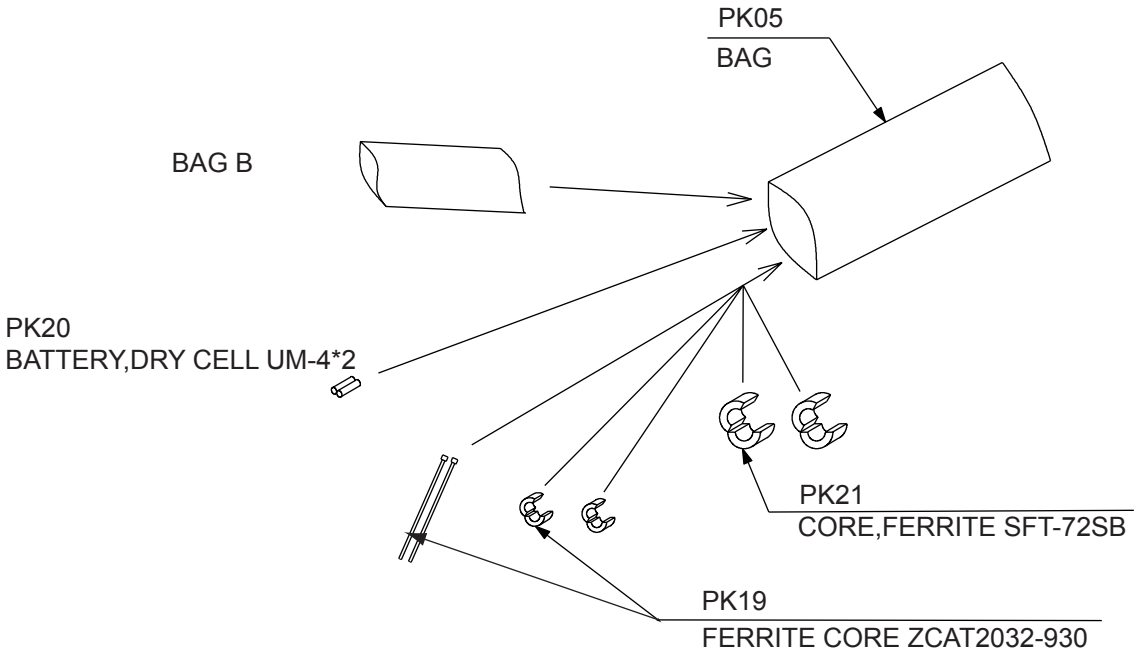
1. BAG A



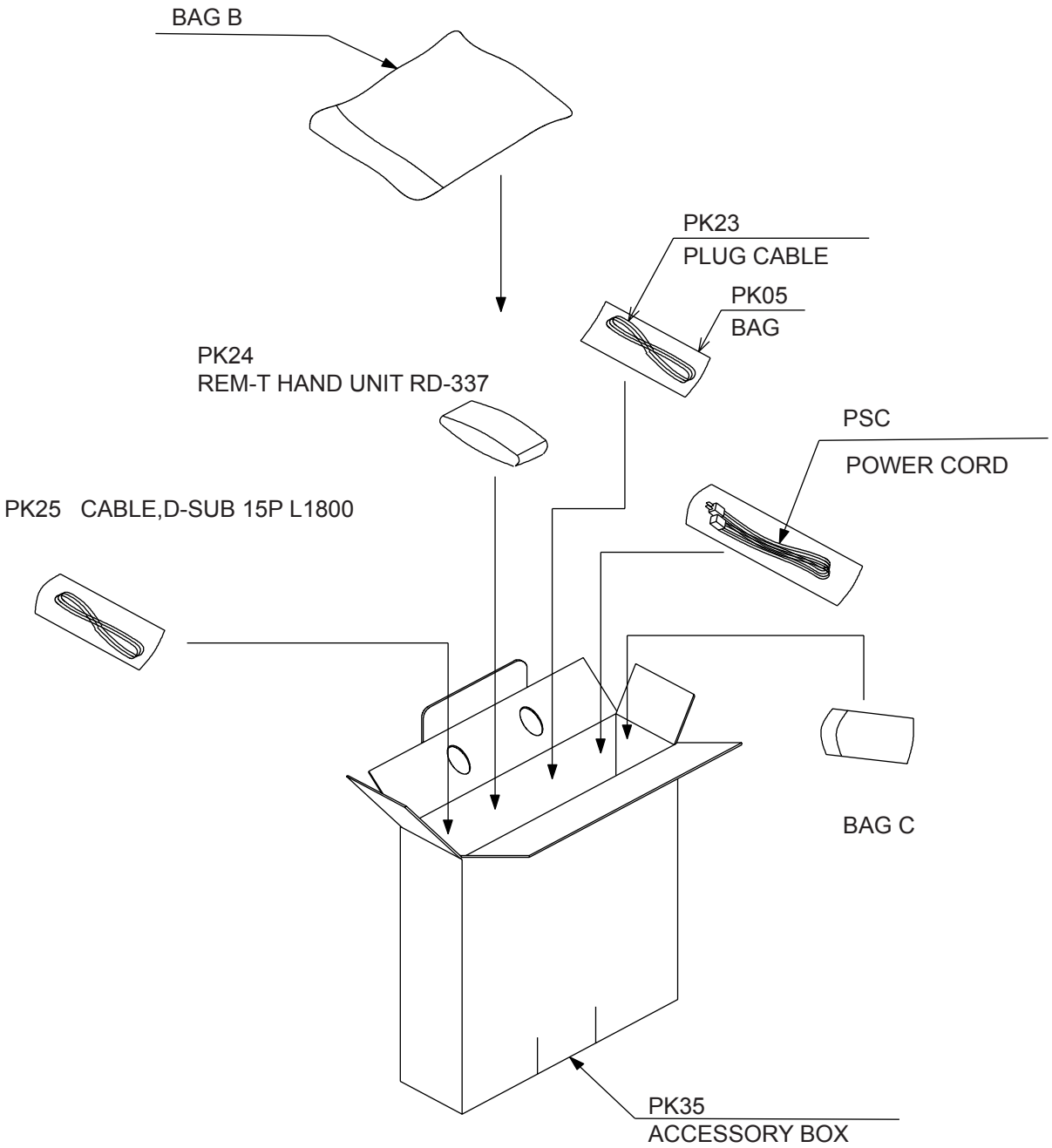
2. BAG B



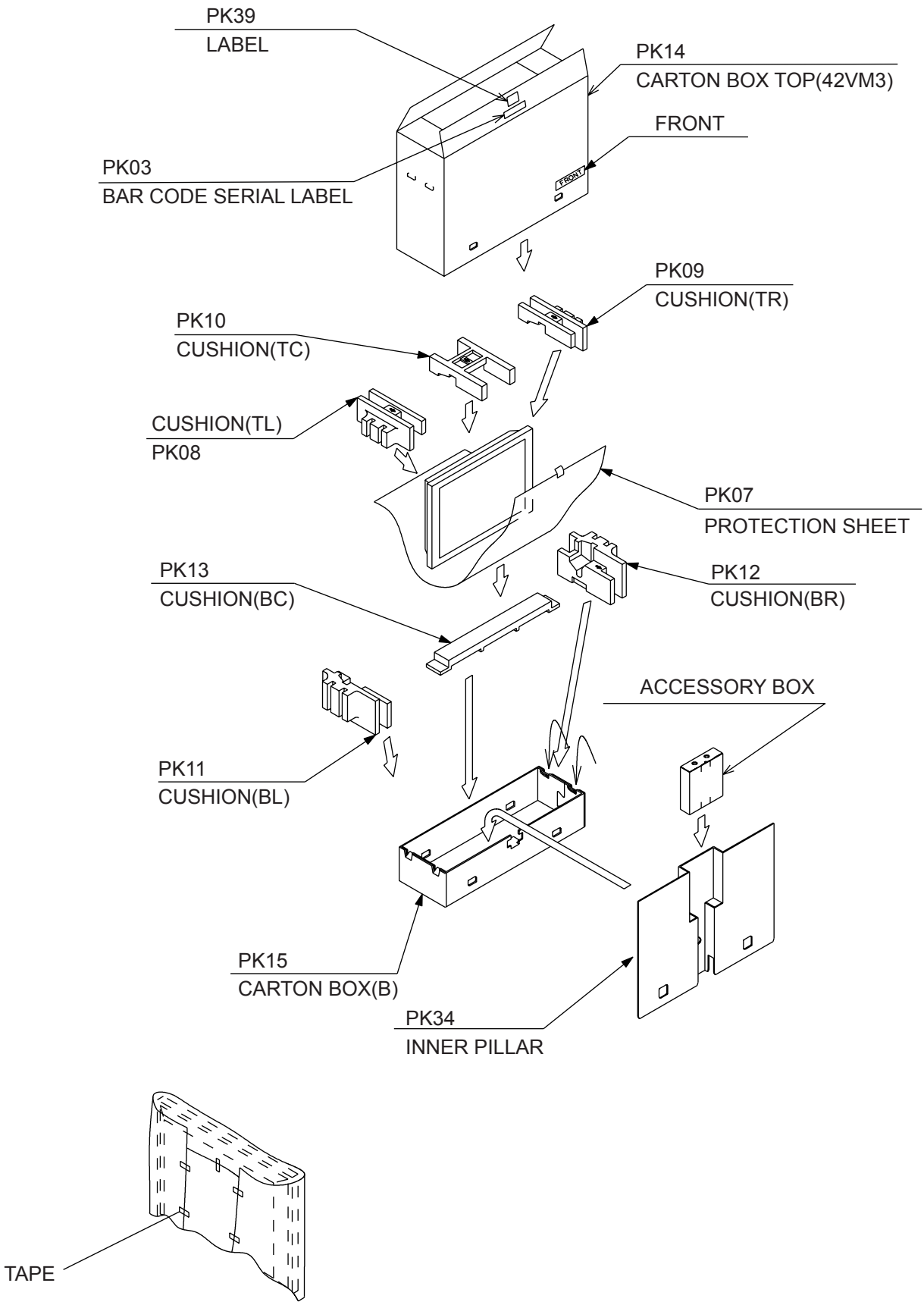
3. BAG C

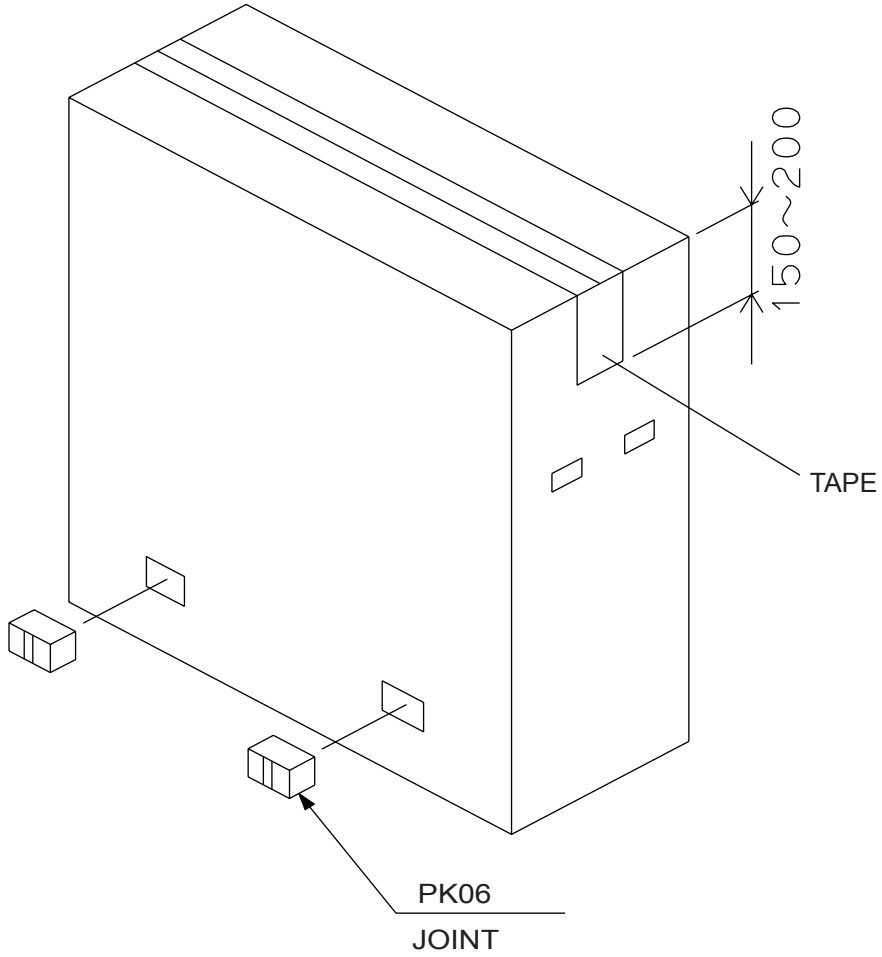


4. ACCESSORY BOX

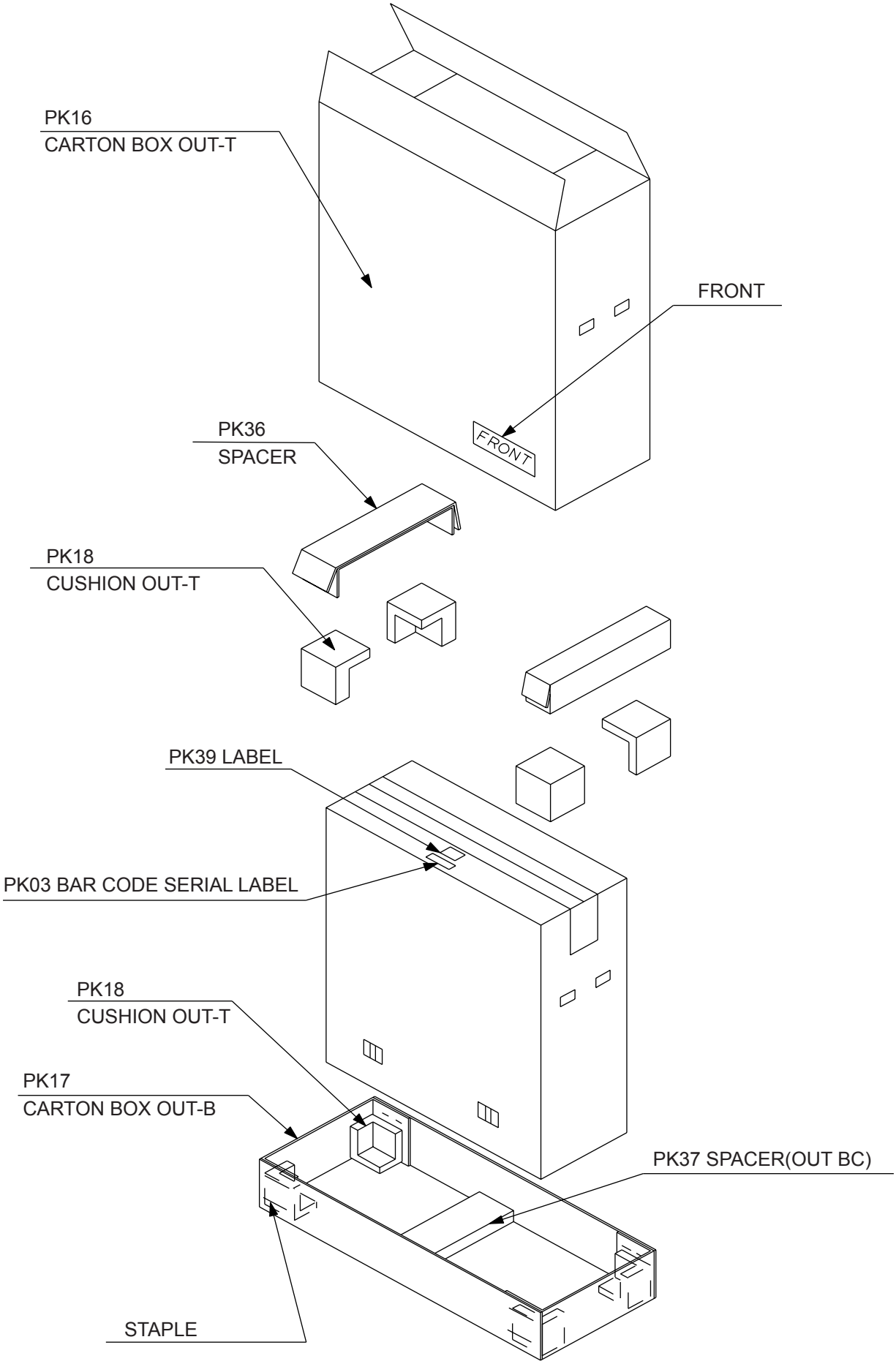


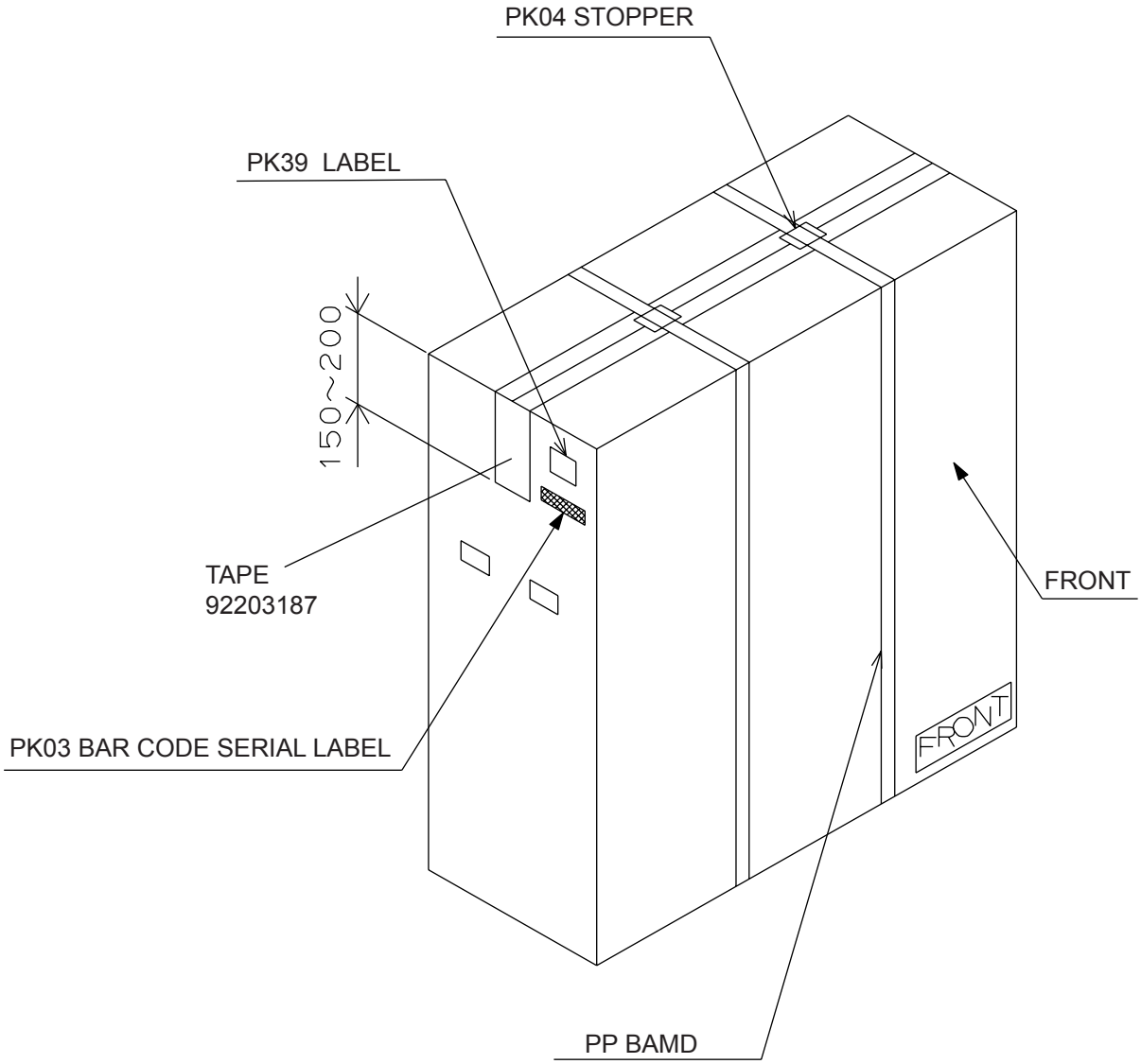
5. CARTON BOX


PK39
LABEL
PK14
CARTON BOX TOP(42VM3)
FRONT
PK03
BAR CODE SERIAL LABEL
FRONT
PK09
CUSHION(TR)
PK10
CUSHION(TC)
CUSHION(TL)
PK08
PK07
PROTECTION SHEET
PK13
CUSHION(BC)
PK12
CUSHION(BR)
ACCESSORY BOX
PK11
CUSHION(BL)
PK15
CARTON BOX(B)
PK34
INNER PILLAR
TAPE


150~200
TAPE
PK06
JOINT

6. CARTON BOX


PK16
CARTON BOX OUT-T
FRONT
FRONT
PK36
SPACER
PK18
CUSHION OUT-T
PK39 LABEL
PK03 BAR CODE SERIAL LABEL
PK18
CUSHION OUT-T
PK17
CARTON BOX OUT-B
PK37 SPACER(OUT BC)
STAPLE


PK04 STOPPER
PK39 LABEL
150~200
TAPE
92203187
FRONT
PK03 BAR CODE SERIAL LABEL
FRONT
PP BAMD

PART LIST

Notes:

1. Parts orders must contain model name, parts number and parts name.
2. When you place an order for spare parts, please refer to the respective service manual and mention the right parts number on your P.O. sheets
3. The letters NSP in the table indicate non-service parts.
4. Please refer to METHOD OF DISASSEMBLY or PACKAGING of servicemanual about a parts layout.

42WP26H				
SYNBOL	PARTS NAME	PARTS NO.	PARTS NO.	Q'TY
*** PDP MODULE ***				
PDP	PDP-NP42B2MF02AA	72700016	09S900016	1
*** PWB ASSYS ***				
A0103	PC BOARD ASSY	72790124	0936M7M01	1
A04	PC BOARD ASSY, DSP(PCB-5015)	72701255	0936G5D01	1
A0509	PC BOARD ASSY	72790125	0936G5S91	1
AUNIT	AUDIO AMPLIFIER MODULE	72790126	03S130221	1
PUNIT	POWER UNIT	72790127	03S110034	1
*** MISCELLANEOUS ELECTRICAL PARTS ***				
CN-AD	WIRE HARNESS, CABLE,SPK L0.9M	72577073	07S580007	1
*** MECHANISM PARTS ***				
M26	COVER, BACK COVER	72624037	029P00561	1
M27	TERMINAL PANEL	72790138	029P00571	1
M30	FRONT PANEL	72790139	029DS0401	1
M34	COVER, POWER SW ASSY	72624038	029PS0581	1
M37	FILTER	72790143	029KS0111	1
M40	TERMINAL B ASSY	72790140	029PS0591	1
*** PRINTED & PACKING MATERIALS ***				
PSC	POWER CORD	72790156	07S550003	1
PK06	JOINT	72678045	24CS0551	4
PK07	PROTECTION SHEET	72790141	024M14821	1
PK08	CUSHION(TL)	72790144	029MS1011	1
PK09	CUSHION(TR)	72790145	029MS1021	1
PK10	CUSHION(TC)	72790146	029MS1031	1
PK11	CUSHION(BL)	72790147	029MS1041	1
PK12	CUSHION(BR)	72790148	029MS1051	1
PK13	CUSHION(BC)	72790149	029MS1061	1
PK14	CARTON BOX TOP	72790134	029MS1911	1
PK15	CARTON BOX(B)	72790135	029MS1101	1
PK23	CABLE, STEREO MINI	72790128	07S580013	1
PK24	REM-T HAND UNIT	72790129	03S120121	1
PK25	CABLE, D-SUB 15P	72790130	07S580006	1
PK281	INST (ENGLISH)	72790131	07S800591	1
PK282	INT (CHINESE)	72790132	07S800601	1
PK35	ACCESSORY BOX	72790142	029MS1641	1
PK41	CONNECTOR, BNC/P-RCA	72790133	06S750001	1

42WP26K				
SYNBOL	PARTS NAME	PARTS NO.	PARTS NO.	Q'TY
*** PDP MODULE ***				
PDP	PDP-NP42B2MF02AA	72700016	09S900016	1
*** PWB ASSYS ***				
A0103	PC BOARD ASSY	72790124	0936M7M01	1
A04	PC BOARD ASSY, DSP(PCB-5015)	72701255	0936G5D01	1
A0509	PC BOARD ASSY	72790125	0936G5S91	1
AUNIT	AUDIO AMPLIFIER MODULE	72790157	03S130222	1
PUNIT	POWER UNIT	72790127	03S110034	1
*** MISCELLANEOUS ELECTRICAL PARTS ***				
CN-AD	WIRE HARNESS, CABLE,SPK L0.9M	72577073	07S580007	1
FL01	SERVICE PARTS, FERRITE CORE ZA	72001821	61605059	1
FL20	SERVICE PARTS, CORE FERRITE SF	72001822	06S170002	1
*** MECHANISM PARTS ***				
M05	BUTTON POWER	72790136	024G05211	1
M24	PANEL DVI	72790137	029H00971	1
M26	COVER, BACK COVER	72624037	029P00561	1
M27	TERMINAL PANEL	72790138	029P00571	1
M30	FRONT PANEL	72790139	029DS0401	1
M34	COVER, POWER SW ASSY	72624038	029PS0581	1
M37	FILTER	72790143	029KS0111	1
M40	TERMINAL B ASSY	72790140	029PS0591	1
*** PRINTED & PACKING MATERIALS ***				
PSC	POWER CODE	72790162	07S550004	1
PK06	JOINT	72678045	24CS0551	4
PK07	PROTECTION SHEET	72790141	024M14821	1
PK08	CUSHION(TL)	72790144	029MS1011	1
PK09	CUSHION(TR)	72790145	029MS1021	1
PK10	CUSHION(TC)	72790146	029MS1031	1
PK11	CUSHION(BL)	72790147	029MS1041	1
PK12	CUSHION(BR)	72790148	029MS1051	1
PK13	CUSHION(BC)	72790149	029MS1061	1
PK14	CARTON BOX TOP	72790134	029MS1911	1
PK15	CARTON BOX(B)	72790135	029MS1101	1
PK23	CABLE, STEREO MINI	72790128	07S580013	1
PK24	REM-T HAND UNIT	72790129	03S120121	1
PK25	CABLE, D-SUB 15P	72790130	07S580006	1
PK28	INST(KOREAN)	72790168	07S800581	1
PK35	ACCESSORY BOX	72790142	029MS1641	1
PK41	CONNECTOR, BNC/P-RCA	72790133	06S750001	1

42WP26R				
SYNBOL	PARTS NAME	PARTS NO.	PARTS NO.	Q'TY
*** PDP MODULE ***				
PDP	PDP-NP42B2MF02AA	72700016	09S900016	1
*** PWB ASSYS ***				
A0103	PC BOARD ASSY	72790124	0936M7M01	1
A04	PC BOARD ASSY, DSP(PCB-5015)	72701255	0936G5D01	1
A0509	PC BOARD ASSY	72790125	0936G5S91	1
AUNIT	AUDIO AMPLIFIER MODULE	72790126	03S130221	1
PUNIT	POWER UNIT	72790127	03S110034	1
*** MISCELLANEOUS ELECTRICAL PARTS ***				
CN-AD	WIRE HARNESS, CABLE,SPK L0.9M	72577073	07S580007	1
FL01	SERVICE PARTS, FERRITE CORE ZA	72001821	61605059	1
FL20	SERVICE PARTS, CORE FERRITE SF	72001822	06S170002	1
*** MECHANISM PARTS ***				
M05	BUTTON POWER	72790136	024G05211	1
M24	PANEL DVI	72790137	029H00971	1
M26	COVER, BACK COVER	72624037	029P00561	1
M27	TERMINAL PANEL	72790138	029P00571	1
M30	FRONT PANEL	72790139	029DS0401	1
M34	COVER, POWER SW ASSY	72624038	029PS0581	1
M37	FILTER	72790143	029KS0111	1
M40	TERMINAL B ASSY	72790140	029PS0591	1
*** PRINTED & PACKING MATERIALS ***				
PSC	POWER CODE	72790225	70800089	1
PK06	JOINT	72678045	24CS0551	4
PK07	PROTECTION SHEET	72790141	024M14821	1
PK08	CUSHION(TL)	72790144	029MS1011	1
PK09	CUSHION(TR)	72790145	029MS1021	1
PK10	CUSHION(TC)	72790146	029MS1031	1
PK11	CUSHION(BL)	72790147	029MS1041	1
PK12	CUSHION(BR)	72790148	029MS1051	1
PK13	CUSHION(BC)	72790149	029MS1061	1
PK14	CARTON BOX TOP	72790134	029MS1911	1
PK15	CARTON BOX(B)	72790135	029MS1101	1
PK23	CABLE, STEREO MINI	72790128	07S580013	1
PK24	REM-T HAND UNIT	72790129	03S120121	1
PK25	CABLE, D-SUB 15P	72790130	07S580006	1
PK281	INST (ENGLISH)	72790131	07S800591	1
PK282	INT (CHINESE)	72790132	07S800601	1
PK35	ACCESSORY BOX	72790142	029MS1641	1
PK41	CONNECTOR, BNC/P-RCA	72790133	06S750001	

CONNECTION DIAGRAMS

POWER SUPPLY
42NH-PDP-4

PDP MODULE
PDP-NP42B2MF02

1	2	3	4	5	6	7	8	9	10
ALARM	GNDD	GNDD	D+5V	GNDD	GNDD	D+60V	NC	D+170V	D+170V

1	2	3	4	5	6	7	8	9
D+170V	D+170V	NC	D+60V	GNDD	GNDD	D+5V	GNDD	GNDD

31 30 29 ... 3 2 1

SENC PWB
PCB-5014C

SCL5	1
SDA5	2
A+5V	3
GND	4

TR

SENB PWB
PCB-5014B

1	SCL5
2	SDA5
3	A+5V
4	GND

1	2	3	4
SCL5	SDA5	A+5V	GND

PD

1	2	3	4	5	6	7	8	9	10
ALARM	GNDD	GNDD	D+5V	GNDD	GNDD	D+60V	NC	D+170V	D+170V

PH

1	2	3	4	5	6	7	8	9
D+170V	D+170V	NC	D+60V	GNDD	GNDD	D+5V	GNDD	GNDD

MAIN PWB SIDE
LABEL"AD"-> AD

CROSS CABLE
AD1

1 2 3 ... 29 30 31

1	GND	22	RC+
2	LE	23	RC-
3	SCK	24	GND
4	SDATA	25	RB+
5	GND	26	RB-
6	ALARM	27	GND
7	INV	28	RA+
8	SL	29	RA-
9	PSSC	30	GND
10	CLE	31	GND
11	PSS		
12	PLE		
13	PSCK		
14	GND		
15	GND		
16	RD+		
17	RD-		
18	GND		
19	RCLK+		
20	RCLK-		
21	GND		

TM

1	2	3	4
SCL5	SDA5	A+5V	GND

DS

GND	1
HDSTP	2
GND	3

AM

DSP PWB
PCB-5015

1
2
3
4
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.
158
159
160

1	NC	51	VOUT_GEV7
2	AMDP_CK2	52	VOUT_GEV6
3	VDD3	53	VOUT_GEV5
4	VDD3	54	VOUT_GEV4
5	VDD3	55	GND2
6	VDD3	56	VOUT_GEV3
7	VDD3	57	VOUT_GEV2
8	GND2	58	VOUT_GEV1
9	GND2	59	VOUT_GEV0
10	GND2	60	GND2
11	GND2	61	VIO_RODD7
12	GND2	62	VIO_RODD6
13	ENAMDP	63	VIO_RODD5
14	SCL1	64	VIO_RODD4
15	SDA1	65	GND2
16	SDA_AMDP	66	VIO_RODD3
17	XRST	67	VIO_RODD2
18	GND2	68	VIO_RODD1
19	SYSCLK	69	VIO_RODD0
20	GND2	70	GND2
21	VIO_BODD7	71	VOUT_REV7
22	VIO_BODD6	72	VOUT_REV6
23	VIO_BODD5	73	VOUT_REV5
24	VIO_BODD4	74	VOUT_REV4
25	GND2	75	GND
26	VIO_BODD3	76	VOUT_REV3
27	VIO_BODD2	77	VOUT_REV2
28	VIO_BODD1	78	VOUT_REV1
29	VIO_BODD0	79	VOUT_REV0
30	GND2	80	GND
31	VPUT_BEV7	81	AMDP_H2
32	VPUT_BEV6	82	AMDP_V2
33	VPUT_BEV5	83	VDD3
34	VPUT_BEV4	84	VDD3
35	GND2	85	VDD3
36	VPUT_BEV3	86	VDD3
37	VPUT_BEV2	87	VDD3
38	VPUT_BEV1	88	GND2
39	VPUT_BEV0	89	GND2
40	GND2	90	GND2
41	VIO_GODD7	91	GND2
42	VIO_GODD6	92	GND2
43	VIO_GODD5	93	GND2
44	VIO_GODD4	94	GND2
45	GND2	95	AMDP_VO
46	VIO_GODD3	96	AMDP_HO
47	VIO_GODD2	97	GND2
48	VIO_GODD1	98	AMDP_CKO
49	VIO_GODD0	99	GND2
50	GND2	100	GND2

101	VIN_BODD7
102	VIN_BODD6
103	VIN_BODD5
104	VIN_BODD4
105	GND2
106	VIN_BODD3
107	VIN_BODD2
108	VIN_BODD1
109	VIN_BODD0
110	GND2
111	VIN_BEV7
112	VIN_BEV6
113	VIN_BEV5
114	VIN_BEV4
115	GND2
116	VIN_BEV3
117	VIN_BEV2
118	VIN_BEV1
119	VIN_BEV0
120	GND2
121	VIN_GODD7
122	VIN_GODD6
123	VIN_GODD5
124	VIN_GODD4
125	GND2
126	VIN_GODD3
127	VIN_GODD2
128	VIN_GODD1
129	VIN_GODD0
130	GND2
131	VIN_GEV7
132	VIN_GEV6
133	VIN_GEV5
134	VIN_GEV4
135	GND2
136	VIN_GEV3
137	VIN_GEV2
138	VIN_GEV1
139	VIN_GEV0
140	GND2
141	VIN_RODD7
142	VIN_RODD6
143	VIN_RODD5
144	VIN_RODD4
145	GND
146	VIN_RODD3
147	VIN_RODD2
148	VIN_RODD1
149	VIN_RODD0
150	GND2
151	VIN_REV7
152	VIN_REV6
153	VIN_REV5
154	VIN_REV4
155	GND
156	VIN_REV3
157	VIN_REV2
158	VIN_REV1
159	VIN_REV0
160	GND2

PM

M+7V	1
GNDD	2
T-ALM	3
GNDD	4
POWER	5
POMUTE	6
NC	7

1	M+7V
2	GNDD
3	T-ALM1
4	GNDD
5	POWER
6	POMUTE
7	NC

PN

D+3.3V	1
D+3.3V	2
D+3.3V	3
D+3.3V	4
GNDD	5
GNDD	6
GNDD	7
GNDD	8

1	D+3.3V
2	D+3.3V
3	D+3.3V
4	D+3.3V
5	GNDD
6	GNDD
7	GNDD
8	GNDD

PV

A+13V	1
GND	2
A+5V	3
GND	4
A+6V	5

PA

S+26V	1
S+26V	2
S.GND	3
S.GND	4
A+13V	5
A.GND	6

LD

1	REMIN1
2	LEDCTL1
3	LEDCTL2
4	GND
5	M+5V

PW

1	SW7
2	POIN
3	GND
4	M+5V
5	M+7V
6	NC

1	2	3	4	5	6
AU-L	GND	AU-R	GND	POMUTE	SCL4AU	SDA4AU

AU

1	2	3
CTL1	CTL2	GND

SW

1	2	3	4	5	6	7	8	9
M+7V	TXD	GND	RXD	M+5V	GND	REMIN2	WIRED_CTL	CONTROL_LOCK

RS

1	2	3	4	5
A+13V	GND	A+5V	GND	A+6V

PV

MAIN PWB
PCB-5014A

PWR PWB
PWC-4419C

1	2	3	4	5
REMIN1	LEDCTL1	LEDCTL2	GND	M+5V

SW7	1
POIN	2
GND	3
M+5V	4
M+7V	5
NC	6

LD

PW

LE

1	2	3	4	5
REMIN1	LEDCTL1	LEDCTL2	GND	M+5V

LED PWB
PWC-4419D

AUDIO AMP MODULE
PD-MA-2

1	2	3	4	5	6	7
AU-L	GND	AU-R	GND	POMUTE	SCL4AU	SDA4AU

1	2	3	4	5	6
S+26V	S+26V	S.GND	S.GND	A+13V	A.GND

PA

GND	1		
LOUT	2	LM	
GND	3		
ROUT	1	RM	
GND	2		

1	GND	
2	LOUT	
3	GND	
1	ROUT	**SP PWB**
2	GND	PWC-4419E

RS

RS232C PWB
PWC-4419A

1	M+7V
2	TXD
3	GND
4	RXD
5	M+5V
6	GND
7	REMIN2
8	WIRED_CTL
9	CONTROL_LOCK

SW

CTL PWB
PWC-4419B

1	CTL1
2	CTL2
3	GND

Connector pin descriptions

PWB installed	Connector name	Pin No.	Signal name	Simplified name	Supplementary description	Signal derection
MAIN-POWER SUPPLY	PN	1	D+3.3V	3.3V Power supply for DIGITAL	3.3V for normal operation	POWER → MAIN
		2	D+3.3V	3.3V Power supply for DIGITAL	3.3V for normal operation	POWER → MAIN
		3	D+3.3V	3.3V Power supply for DIGITAL	3.3V for normal operation	POWER → MAIN
		4	D+3.3V	3.3V Power supply for DIGITAL	3.3V for normal operation	POWER → MAIN
		5	GND	GND		POWER → MAIN
		6	GND	GND		
		7	GND	GND		
		8	GND	GND		
MAIN-POWER SUPPLY	PM	1	M+7V	7V power supply for microcomputer	6.8V for AC power input	POWER → MAIN
		2	GNDD	GND		
		3	T-ALM	Alarm signal	5V for normal operation, 0V for thermal error in the power unit	POWER → MAIN
		4	GNDD	GND		
		5	POWER	Power control	4.9V when the power supply is ON 0V in standby or power management mode	MAIN → POWER
		6	POMUTE	Mute signal when AC power supply is ON and OFF	4.8V for AC power input	POWER → MAIN
		7	NC			
MAIN-POWER SUPPLY	PV	1	A+13V	13V Power supply for ANALOG circuit	13V for normal operation	POWER → MAIN
		2	GND	GND		
		3	A+5V	5V Power supply for ANALOG circuit	5V for normal operation	POWER → MAIN
		4	GND	GND		
		5	A+6V	6V Power supply for ANALOG circuit	6V for normal operation	POWER → MAIN
MAIN	DS	1	GND	GND		
		2	HDSTP	Video mute control for chroma signals	0V when a DS connector is inserted; video display is presented. 5V without a DS connector; video mute is effected.	
		3	GND	GND		
MAIN-AUDIO	AU	1	AU_L	Audio signal L CH	The selected signal output is generated.	MAIN → AUDIO
		2	GND	GND		
		3	AU_R	Audio signal R CH	The selected signal output is generated.	MAIN → AUDIO
		4	GND	GND		
		5	POMUTE	Mute signal when AC power supply is ON and OFF	4.8V for AC power input	MAIN → AUDIO
		6	SCL4AU	Clock line for the I2C bus	For audio unit control	MAIN → AUDIO
		7	SDA4AU	Data line for the I2C bus	For audio unit control	MAIN → AUDIO
MAIN-RS232C	RS	1	M+7V	7V power supply; same as for microcomputer	6.8V for AC power input	MAIN → 232C
		2	TXD	RS-232 driver output	5V while 232C control is not in operation	MAIN → 232C
		3	GND	GND		
		4	RXD	RS-232 receiver input	5V while 232C control is not in operation	MAIN → 232C
		5	M+5V	5V power supply; same as for microcomputer	5V when the main power supply is ON	MAIN → 232C
		6	GND	GND		
		7	REMIN2	Data signal for the wired remote control	5V when data are not received	232C → MAIN
		8	WIRED_CTL	Insertion control for the wired remote control	5V usually; 0V when inserted	232C → MAIN
		9	CHILD_LOCK	Chile lock control	0V when SW is OFF; 5V when SW is ON	232C → MAIN
MAIN-SENB	TM	1	SCL5	Clock line for the I2C bus	For temperature sensor	MAIN → SENB
		2	SDA5	Data line for the I2C bus	For temperature sensor	MAIN → SENB
		3	A+5V	5V power supply for analog signals	5V for normal operation	MAIN → SENB
		4	GND	GND		

PWB installed	Connector name	Pin No.	Signal name	Simplified name	Supplementary description	Signal derection
SENB-SENC	TR	1	SCL5	Clock line for the I2C bus	For temperature sensor	SENB → SENC
		2	SDA5	Data line for the I2C bus	For temperature sensor	SENB → SENC
		3	A+5V	5V power supply for analog signals	5V for normal operation	SENB → SENC
		4	GND	GND		
MAIN-PDP MODULE	AD	1	GND	GND		
		2	LE	Latch enable for serial data		MAIN → PDP module
		3	SCK	Serial clock		MAIN → PDP module
		4	SDATA	Serial data for various setting		MAIN → PDP module
		5	GND	GND		
		6	ALARM	Alarm signal for panel breakage	3.3V for normal operation; 0V in alarm mode	PDP module → MAIN
		7	INV	Test terminal (GND)		
		8	SL	GND		
		9	PSSC	Control data input for power save		MAIN → PDP module
		10	CLE	PSS latch enable		MAIN → PDP module
		11	PSS	Average signal level data output for power save		PDP module → MAIN
		12	PLE	PSS lead enable		MAIN → PDP module
		13	PSCK	CLK for power save data I/O		MAIN → PDP module
		14	GND	GND		
		15	GND	GND		
		16	RD+	VIDEO input +		MAIN → PDP module
		17	RD–	VIDEO input –		MAIN → PDP module
		18	GND	GND		
		19	RCLK2+	CLK + for VIDEO		MAIN → PDP module
		20	RCLK2–	CLK – for VIDEO		MAIN → PDP module
		21	GND	GND		
		22	RC+	VIDEO input C+		MAIN → PDP module
		23	RC–	VIDEO input C–		MAIN → PDP module
		24	GND	GND		
		25	RB+	VIDEO input B+		MAIN → PDP module
		26	RB–	VIDEO input B–		MAIN → PDP module
		27	GND	GND		
		28	RA+	VIDEO input A+		MAIN → PDP module
		29	RA–	VIDEO input A–		MAIN → PDP module
		30	GND	GND		
		31	GND	GND		MAIN → PDP module
MAIN-PWR	LD	1	REMIN1	Infrared ray remote control data	4.8V when data are not received	PWR → MAIN
		2	LEDCTL1	Standby LED control	0V when the power supply is ON; 5V in standby mode	MAIN → PWR
		3	LEDCTL2	Standby LED control	5V when the power supply is ON; 0V in standby mode	MAIN → PWR
		4	GND	GND		
		5	M+5V	5V power supply for microcomputer	5V when the main power supply is ON	MAIN → PWR
MAIN-PWR	PW	1	SW7	Power supply starting control	6.8V when the main power supply is ON	MAIN → PWR
		2	POIN	Power supply starting detection	5V in normal operation, standby, and power management modes; 0V for others	PWR → MAIN
		3	GND	GND		
		4	M+5V	5V power supply for microcomputer	5V in normal operation, standby, and power management modes; 0V for others	PWR → MAIN
		5	M+7V	7V power supply for microcomputer	6.8V when the main power supply is ON	MAIN → PWR
		6	NC	No-connection terminal		

PWB installed	Connector name	Pin No.	Signal name	Simplified name	Supplementary description	Signal derection
MAIN-SW	SW	1	CTL1	Key input detectiont	5V when no key input is available	SW → MAIN
		2	CTL2	Key input detection	5V when no key input is available	SW → MAIN
		3	GND	GND		
PWR-LED	LE	1	REMIN1	Infrared ray remote control data	4.8V when data are not received	LED → PWR
		2	LEDCTL1	Standby LED control	0V when the power supply is ON; 5V in standby mode	PWR → LED
		3	LEDCTL2	Standby LED control	5V when the power supply is ON; 0V in standby mode	PWR → LED
		4	GND	GND		
		5	M+5V	5V power supply for microcomputer	5V when the main power supply is ON	PWR → LED
POWER AUDIO	PA	1	S+26	+26V power supply for audio circuit	26V for normal operation	POWER → AUDIO
		2	S+26	+26V power supply for audio circuit	26V for normal operation	
		3	S.GND	GND		POWER → AUDIO
		4	S.GND	GND		
		5	A+13	13V power supply for analog circuit	13V for normal operation	POWER → AUDIO
		6	A.GND	GND		
POWER SUPPLY-PDP MODULE	PD	1	ALARM	Alarm signal for the PDP module	5V for normal operation; 0V when the PDP module is out of order	PDP module → POWER
		2	GNDD	GND		
		3	GNDD	GND		
		4	D+5	5V power supply for DIGITAL circuit	5V for normal operation	POWER → PDP module
		5	GNDD	GND		
		6	GNDD	GND		
		7	D+60	60V power supply for DIGITAL circuit	60V for normal operation	POWER → PDP module
		8	NC	Terminals not connected		
		9	D+170	170V power supply for DIGITAL circuit	170V for normal operation (by PDP module voltage)	POWER → PDP module
		10	D+170	170V power supply for DIGITAL circuit	170V for normal operation (by PDP module voltage)	POWER → PDP module
POWER SUPPLY-PDP MODULE	PH	1	D+170	170V power supply for DIGITAL circuit	170V for normal operation (by PDP module voltage)	POWER → PDP module
		2	D+170	170V power supply for DIGITAL circuit	170V for normal operation (by PDP module voltage)	POWER → PDP module
		3	NC	Terminals not connected		
		4	D+60	60V power supply for DIGITAL circuit	60V for normal operation	POWER → PDP module
		5	GNDD	GND		
		6	GNDD	GND		
		7	D+5	5V power supply for DIGITAL circuit	5V for normal operation	POWER → PDP module
		8	GNDD	GND		
		9	GNDD	GND		
AUDIO-SP	LM	1	GND	GND		
		2	LOUT	Right-side speaker output	Right-side speaker output	AUDIO → SP
		3	GND	GND		
AUDIO-SP	RM	1	ROUT	Left-side speaker output	Left-side speaker output	AUDIO → SP
		2	GND	GND		
MAIN-DSP	AM	1	NC			
		2	AMDP_CK2	Not used		
		3	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		4	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		5	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		6	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		7	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		8	GND2			
		9	GND2			
		10	GND2			

PWB installed	Connector name	Pin No.	Signal name	Simplified name	Supplementary description	Signal derection
		11	GND2			
		12	GND2			
		13	ENAMDP	Not used		
		14	SCL1	Clock line for the I2C bus	For DSP	MAIN → DSP
		15	SDA1	Data line for the I2C bus	For DSP	MAIN → DSP
		16	SDA_AMDP	Data line for the I2C bus	For DSP	DSP → MAIN
		17	XRST	Reset signal for the DSP circuit	5V for normal operation	MAIN → DSP
		18	GND2			
		19	SYSCLK	System lock signal for the DSP circuit	10MHz	MAIN → DSP
		20	GND2			
		21	VIO_BODD7	Digital video signal (B)	MSB	DSP → MAIN
		22	VIO_BODD6	Digital video signal (B)		DSP → MAIN
		23	VIO_BODD5	Digital video signal (B)		DSP → MAIN
		24	VIO_BODD4	Digital video signal (B)		DSP → MAIN
		25	GND2			
		26	VIO_BODD3	Digital video signal (B)		DSP → MAIN
		27	VIO_BODD2	Digital video signal (B)		DSP → MAIN
		28	VIO_BODD1	Digital video signal (B)		DSP → MAIN
		29	VIO_BODD0	Digital video signal (B)	LSB	DSP → MAIN
		30	GND2			
		31	VPUT_BEV7	Digital video signal (B)	MSB	DSP → MAIN
		32	VPUT_BEV6	Digital video signal (B)		DSP → MAIN
		33	VPUT_BEV5	Digital video signal (B)		DSP → MAIN
		34	VPUT_BEV4	Digital video signal (B)		DSP → MAIN
		35	GND2			
		36	VPUT_BEV3	Digital video signal (B)		DSP → MAIN
		37	VPUT_BEV2	Digital video signal (B)		DSP → MAIN
		38	VPUT_BEV1	Digital video signal (B)		DSP → MAIN
		39	VPU_BEV0	Digital video signal (B)	LSB	DSP → MAIN
		40	GND2			
		41	VIO_GODD7	Digital video signal (G)	MSB	DSP → MAIN
		42	VIO_GODD6	Digital video signal (G)		DSP → MAIN
		43	VIO_GODD5	Digital video signal (G)		DSP → MAIN
		44	VIO_GODD4	Digital video signal (G)		DSP → MAIN
		45	GND2			
		46	VIO_GODD3	Digital video signal (G)		DSP → MAIN
		47	VIO_GODD2	Digital video signal (G)		DSP → MAIN
		48	VIO_GODD1	Digital video signal (G)		DSP → MAIN
		49	VIO_GODD0	Digital video signal (G)	LSB	DSP → MAIN
		50	GND2			
		51	VOUT_GEV7	Digital video signal (G)	MSB	DSP → MAIN
		52	VOUT_GEV6	Digital video signal (G)		DSP → MAIN
		53	VOUT_GEV5	Digital video signal (G)		DSP → MAIN
		54	VOUT_GEV4	Digital video signal (G)		DSP → MAIN
		55	GND2			
		56	VOUT_GEV3	Digital video signal (G)		DSP → MAIN
		57	VOUT_GEV2	Digital video signal (G)		DSP → MAIN
		58	VOUT_GEV1	Digital video signal (G)		DSP → MAIN

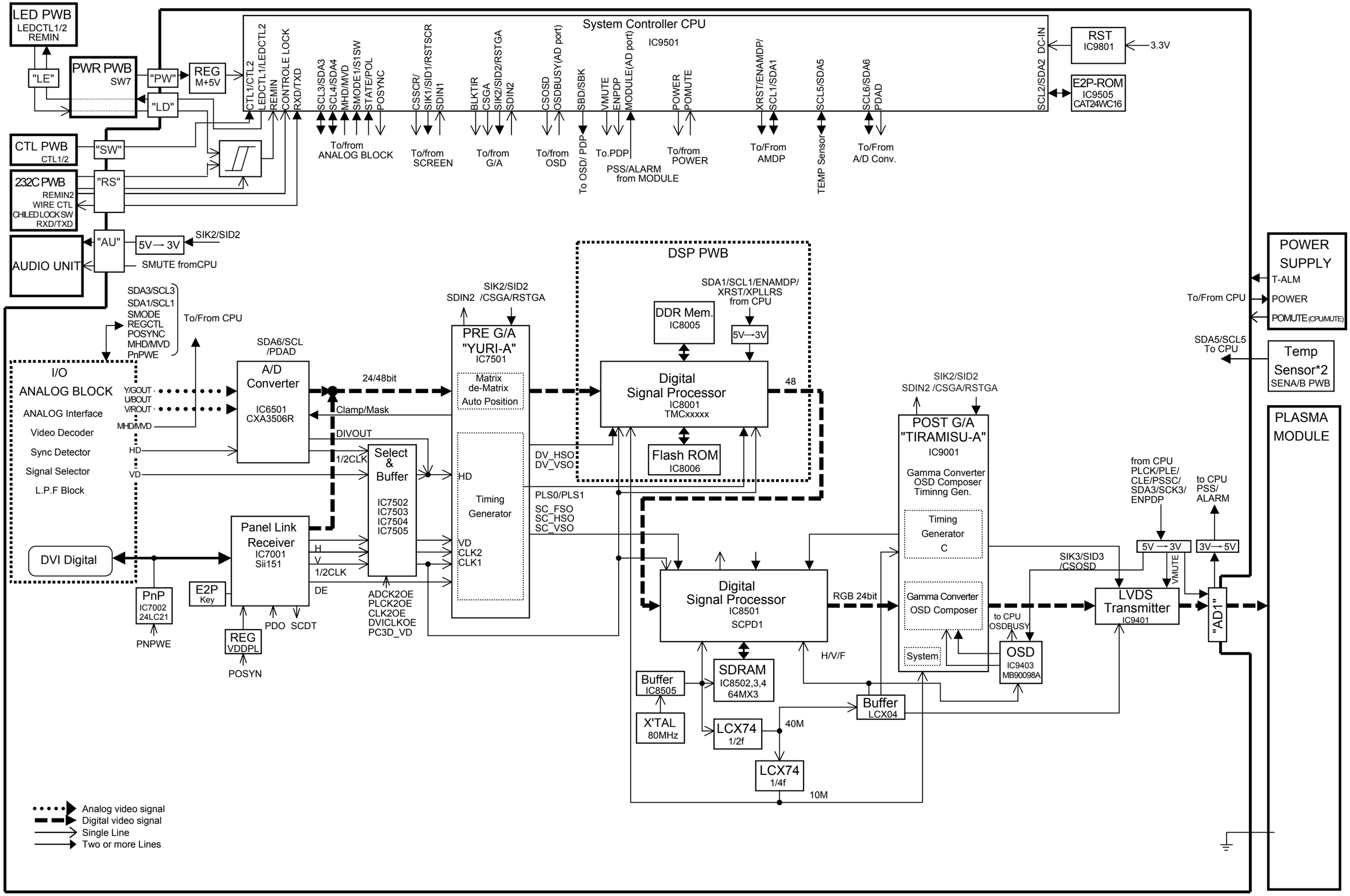
PWB installed	Connector name	Pin No.	Signal name	Simplified name	Supplementary description	Signal derection
		59	VOUT_GEV0	Digital video signal (G)	LSB	DSP → MAIN
		60	GND2			
		61	VIO_RODD7	Digital video signal (R)	MSB	DSP → MAIN
		62	VIO_RODD6	Digital video signal (R)		DSP → MAIN
		63	VIO_RODD5	Digital video signal (R)		DSP → MAIN
		64	VIO_RODD4	Digital video signal (R)		DSP → MAIN
		65	GND2			
		66	VIO_RODD3	Digital video signal (R)		DSP → MAIN
		67	VIO_RODD2	Digital video signal (R)		DSP → MAIN
		68	VIO_RODD1	Digital video signal (R)		DSP → MAIN
		69	VIO_RODD0	Digital video signal (R)	LSB	DSP → MAIN
		70	GND2			
		71	VOUT_REV7	Digital video signal (R)	MSB	DSP → MAIN
		72	VOUT_REV6	Digital video signal (R)		DSP → MAIN
		73	VOUT_REV5	Digital video signal (R)		DSP → MAIN
		74	VOUT_REV4	Digital video signal (R)		DSP → MAIN
		75	GND			
		76	VOUT_REV3	Digital video signal (R)		DSP → MAIN
		77	VOUT_REV2	Digital video signal (R)		DSP → MAIN
		78	VOUT_REV1	Digital video signal (R)		DSP → MAIN
		79	VOUT_REV0	Digital video signal (R)	LSB	DSP → MAIN
		80	GND			
		81	AMDP_H2	Not used		
		82	AMDP_V2	Not used		
		83	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		84	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		85	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		86	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		87	VDD3	3.3V power supply for DIGITAL	3.3V for normal operation	MAIN → DSP
		88	GND2			
		89	GND2			
		90	GND2			
		91	GND2			
		92	GND2			
		93	GND2			
		94	GND2			
		95	AMDP_VO	Vertical sync signal for the DSP circuit		MAIN → DSP
		96	AMDP_HO	Horizontal sync signal for the DSP circuit		MAIN → DSP
		97	GND2			
		98	AMDP_CKO	Clock signal for the DSP circuit		MAIN → DSP
		99	GND2			
		100	GND2			
		101	VIN_BODD7	Digital video signal (B/Pb)	MSB	MAIN → DSP
		102	VIN_BODD6	Digital video signal (B/Pb)		MAIN → DSP
		103	VIN_VODD5	Digital video signal (B/Pb)		MAIN → DSP
		104	VIN_BODD4	Digital video signal (B/Pb)		MAIN → DSP
		105	GND2			
		106	VIN_BODD3	Digital video signal (B/Pb)		MAIN → DSP

PWB installed	Connector name	Pin No.	Signal name	Simplified name	Supplementary description	Signal derection
		107	VIN_BODD2	Digital video signal (B/Pb)		MAIN → DSP
		108	VIN_BODD1	Digital video signal (B/Pb)		MAIN → DSP
		109	VIN_BODD0	Digital video signal (B/Pb)	LSB	MAIN → DSP
		110	GND			
		111	VIN_BEV7	Digital video signal (B/Pb)	MSB	MAIN → DSP
		112	VIN_BEV6	Digital video signal (B/Pb)		MAIN → DSP
		113	VIN_BEV5	Digital video signal (B/Pb)		MAIN → DSP
		114	VIN_BEV4	Digital video signal (B/Pb)		MAIN → DSP
		115	GND2			
		116	VIN_BEV3	Digital video signal (B/Pb)		MAIN → DSP
		117	VIN_BEV2	Digital video signal (B/Pb)		MAIN → DSP
		118	VIN_BEV1	Digital video signal (B/Pb)		MAIN → DSP
		119	VIN_BEV0	Digital video signal (B/Pb)	LSB	MAIN → DSP
		120	GND2			
		121	VIN_GODD7	Digital video signal (G/Y)	MSB	MAIN → DSP
		122	VIN_GODD6	Digital video signal (G/Y)		MAIN → DSP
		123	VIN_GODD5	Digital video signal (G/Y)		MAIN → DSP
		124	VIN_GODD4	Digital video signal (G/Y)		MAIN → DSP
		125	GND2			
		126	VIN_GODD3	Digital video signal (G/Y)		MAIN → DSP
		127	VIN_GODD2	Digital video signal (G/Y)		MAIN → DSP
		128	VIN_GODD1	Digital video signal (G/Y)		MAIN → DSP
		129	VIN_GODD0	Digital video signal (G/Y)	LSB	MAIN → DSP
		130	GND2			
		131	VIN_GEV7	Digital video signal (G/Y)	MSB	MAIN → DSP
		132	VIN_GEV6	Digital video signal (G/Y)		MAIN → DSP
		133	VIN_GEV5	Digital video signal (G/Y)		MAIN → DSP
		134	VIN_GEV4	Digital video signal (G/Y)		MAIN → DSP
		135	GND2			
		136	VIN_GEV3	Digital video signal (G/Y)		MAIN → DSP
		137	VIN_GEV2	Digital video signal (G/Y)		MAIN → DSP
		138	VIN_GEV1	Digital video signal (G/Y)		MAIN → DSP
		139	VIN_GEV0	Digital video signal (G/Y)	LSB	MAIN → DSP
		140	GND2			
		141	VIN_RODD7	Digital video signal (R/Pr)	MSB	MAIN → DSP
		142	VIN_RODD6	Digital video signal (R/Pr)		MAIN → DSP
		143	VIN_RODD5	Digital video signal (R/Pr)		MAIN → DSP
		144	VIN_RODD4	Digital video signal (R/Pr)		MAIN → DSP
		145	GND			
		146	VIN_RODD3	Digital video signal (R/Pr)		MAIN → DSP
		147	VIN_RODD2	Digital video signal (R/Pr)		MAIN → DSP
		148	VIN_RODD1	Digital video signal (R/Pr)		MAIN → DSP
		149	VIN_RODD0	Digital video signal (R/Pr)	LSB	MAIN → DSP
		150	GND2			
		151	VIN_REV7	Digital video signal (R/Pr)	MSB	MAIN → DSP
		152	VIN_REV6	Digital video signal (R/Pr)		MAIN → DSP
		153	VIN_REV5	Digital video signal (R/Pr)		MAIN → DSP
		154	VIN_REV4	Digital video signal (R/Pr)		MAIN → DSP

PWB installed	Connector name	Pin No.	Signal name	Simplified name	Supplementary description	Signal derection
		155	GND			
		156	VIN_REV3	Digital video signal (R/Pr)		MAIN → DSP
		157	VIN_REV2	Digital video signal (R/Pr)		MAIN → DSP
		158	VIN_REV1	Digital video signal (R/Pr)		MAIN → DSP
		159	VIN_REV0	Digital video signal (R/Pr)	LSB	MAIN → DSP
		160	GND			

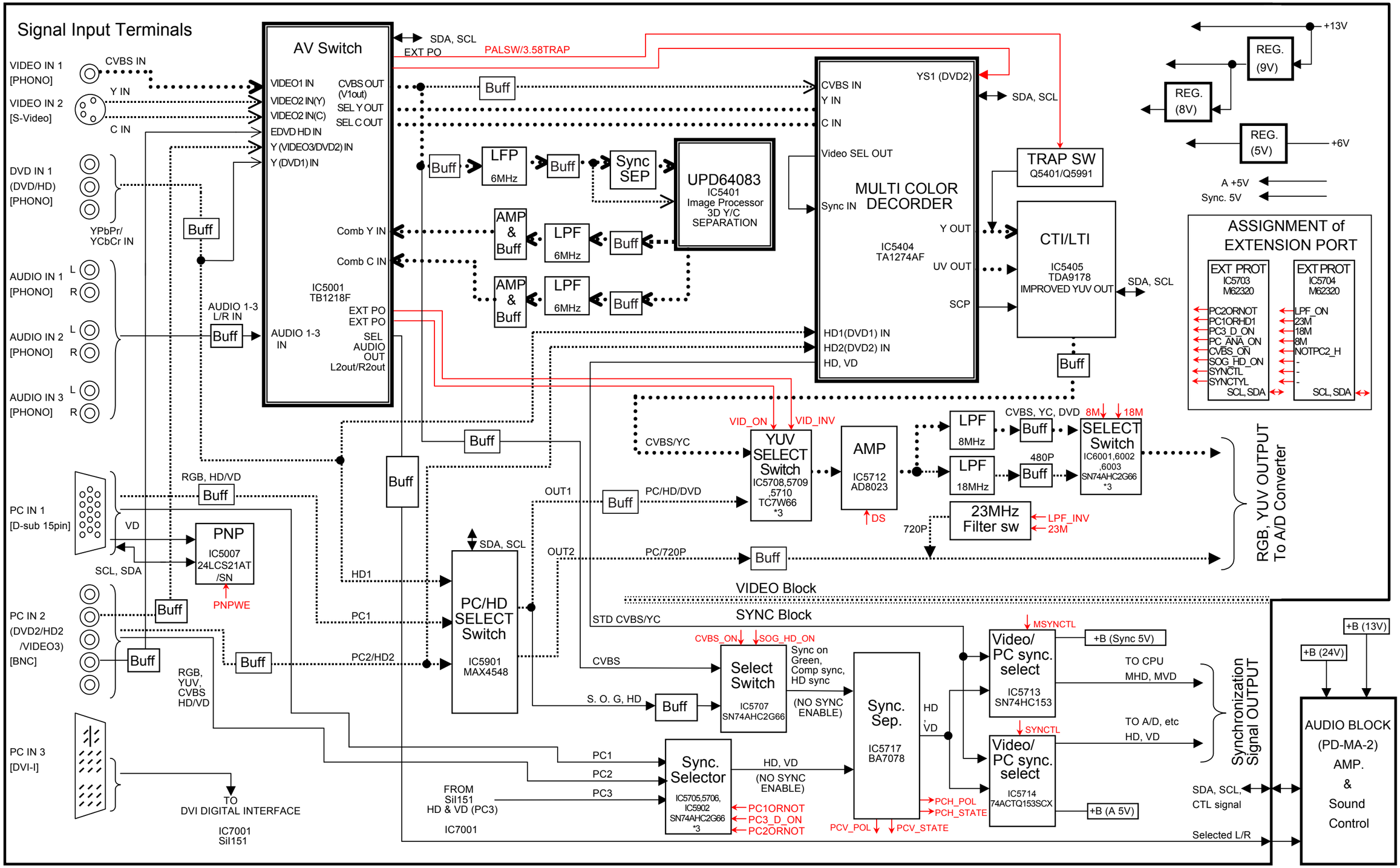
BLOCK DIAGRAMS

SYSTEM & DIGITAL BLOCK DIAGRAM

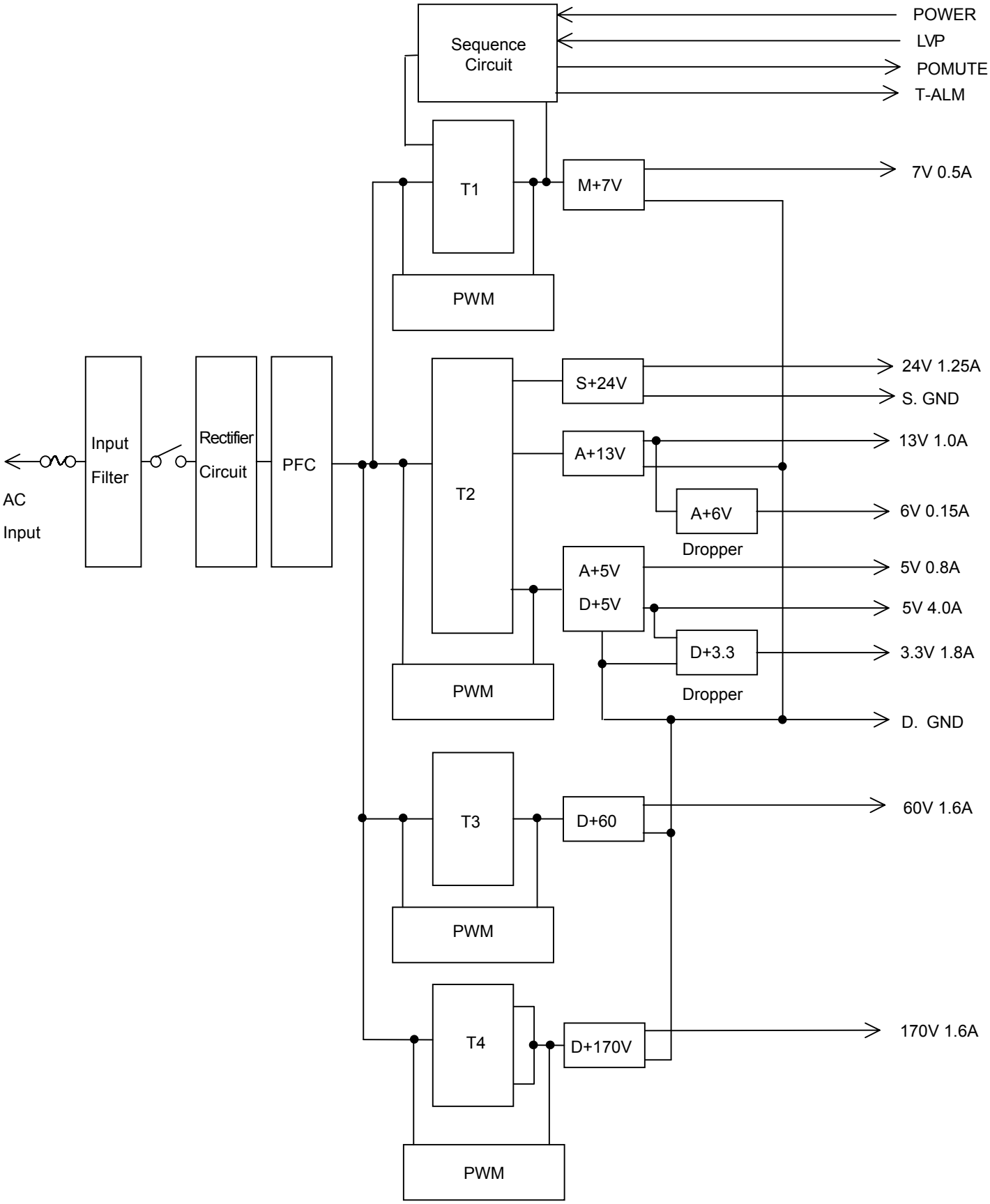


I/O, ANALOG BLOCK DIAGRAM

- Signal stream line at NTSC VIDEO
- Analog video signal line
- Analog video signal lines (two or more)
- Other line
- Other lines (two or more)



PS BLOCK DIAGRAM



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